Tetrahedron

The International Journal for the Rapid Publication of
Critical Reviews and Original Research Communications
in Organic Chemistry and Related Disciplines, Especially
Bio-organic Chemistry
Founded jointly by Sir Robert Robinson and R. B. Woodward
Chairman of the executive board of editors for
Tetrahedron publications
Sir Derek Barton, Texas A & M University, USA

SUBJECT INDEX, AUTHOR INDEX AND VOLUME CONTENTS

Volume 47 (1991)

Pergamon Press: Oxford New York Seoul Tokyo

TETRAHEDRON

The International Journal for the Rapid Publication of Critical Reviews and Original Research Communications in Organic Chemistry and Related Disciplines, Especially Bio-organic Chemistry

EXECUTIVE BOARD OF EDITORS FOR TETRAHEDRON PUBLICATIONS

Chairman: **Professor Sir Derek Barton, FRS,** Department of Chemistry, Texas A and M University, College Station, Texas 77843–3255, USA (Fax: 1 409 845 4719)

Professor J. E. Baldwin, FRS, Dyson Perrins Laboratory, Oxford, UK (Fax: 44 865 275632)
Professor D. L. Boger, Department of Chemistry, The Scripps Research Institute, La Jolla, CA 92037, USA (Fax: 1 619 554 6401)
Dr S. G. Davies, Dyson Perrins Laboratory, Oxford, UK (Fax: 44 865 275633)
Professor L. Ghosez, Laboratoire de Chimie Organique de Synthèse, Université Catholique de Louvain, B-1348 Louvain-la-Neuve, Belgium (Fax: 10 47 41 68)
Professor S. Ito, Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Yamashiro-cho, Tokushima 770, Japan (Fax: 81 886 55 8774)
Professor A. R. Katritzky, FRS, Department of Chemistry, University of Florida, Gainesville, FL 32611, USA (Fax: 1 904 392 9199)
Professor N. K. Kochetkov, N. D. Zelinsky Institute of Organic Chemistry, Academy of Sciences USSR, Leninsky Prospekt 47, Moscow B-334, USSR (Fax: 7 095 13 55 328)
Professor A. McKillop, University of East Anglia, School of Chemical Sciences, University Plain, Norwich NR4 7TJ, UK (Fax: 44 603 507773)
Professor A. Nickon, Department of Chemistry, The Johns Hopkins University, Baltimore, MD 21218, USA (Fax: 1 410 516 8420)
Professor W. D. Ollis, FRS, Department of Chemistry, University of Sheffield, Sheffield, S3 7HF, UK (Fax: 44 742 668318)
Professor G. Ourisson, Centre National de la Recherche Scientifique, Centre de Neurochimie, 5 rue Blaise Pascal, 67084 Strasbourg Cedex, France (Fax: 33 88 607620)
Professor T. Shioiri, Faculty of Pharmaceutical Sciences, Nagoya City University, Tanabe-dori, Mizuho-ku, Nagoya 467, Japan (Fax: 81 52 834 4172)
Professor W. Steglich, Institut für Organische Chemie und Biochemie der Universität Bonn, D-5300 Bonn 1, Gerhard-Dogmagk-Strasse 1, Germany (Fax: 49 228 258216)
Professor H. H. Wasserman, Department of Chemistry, Yale University, PO Box 6666, New Haven, CT 06511, USA (Fax: 1 203 432 9990)
Professor W. T. Wipke, Thimann Laboratories, University of California, Santa Cruz, CA 95064, USA (Fax: 1 408 459 4716)

Editor Tetrahedron Organic Chemistry Series: **Professor J. E. Baldwin, FRS,** Dyson Perrins Laboratory, Oxford UK

BOARD OF CONSULTING EDITORS

F. Arcamone, Florence
D. Arigoni, Zurich
P. D. Bartlett, Fort Worth, TX
A. R. Battersby, Cambridge
A. L. J. Beckwith, Canberra
R. G. Bergman, Berkeley, CA
A. J. Birch, Canberra
R. Breslow, New York, NY
H. C. Brown, Lafayette, IN
E. J. Corey, Cambridge, MA
J. W. Cornforth, Brighton
D. J. Cram, Los Angeles, CA
P. Deslongchamps, Quebec
M. J. S. Dewar, Gainesville, FL
C. Djerassi, Stanford, CA
W. von E. Doering, Cambridge, MA
J. E. Dubois, Paris
J. Elguero, Madrid
A. Eschenmoser, Zurich
D. A. Evans, Cambridge, MA
G. Fodor, Morgantown, WV
A. Gonzalez Gonzalez, Tenerife
Y. Hirata, Nagoya
R. Huisgen, Munich
W. S. Johnson, Stanford, CA
M. Julia, Paris
A. Kjaer, Lyngby
V. A. Koptyug, Novosibirsk
M. Lahav, Rehovat
J.-M. Lehn, Strasbourg
R. U. Lemieux, Alberta
X. T. Liang, Beijing
P. de Mayo, Ontario
A. I. Meyers, Fort Collins, CO
J. Michalski, Lodz
M. L. Mihailovic, Belgrade
K. Mori, Tokyo
T. Mukaiyama, Tokyo
K. Nakanishi, New York, NY
T. Norin, Stockholm
R. Noyori, Nagoya
S. Nozoe, Sendai, Japan
W. Oppolzer, Geneva
H. Paulsen, Hamburg
P. Potier, Gif-sur-Yvette
S. K. Pradhan, Bombay
V. Prelog, Zurich
G. Quinkert, Frankfurt
R. A. Raphael, Cambridge
C. W. Rees, London
J. D. Roberts, Pasadena, CA
A. I. Scott, College Station, TX
K. B. Sharpless, La Jolla, CA
G. Snatzke, Bochum
H. A. Staab, Heidelberg
G. Stork, New York, NY
Sukh Dev, New Delhi
W. Tochtermann, Kiel
A. Todd, Cambridge
H. G. Viehe, Louvain-la-Neuve
E. Vogel, Cologne
P. von Ragué Schleyer, Erlangen
Y. Wang, Shanghai
K. B. Wiberg, New Haven, CT
E. Winterfeldt, Hannover
N. S. Zefirov, Moscow

Publishing, Subscription, and Advertising Offices: Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, UK (Phone: 0865 794141; Fax: 0865 60285) and Pergamon Press Inc., 395 Saw Mill River Road, Elmsford, New York, 10523, USA (Phone 914 592 7700; Fax: 1 914 592 3625)

Sixty issues per year including *Tetrahedron: Asymmetry*

Annual Subscription Rates (1992)

Annual Institutional Subscription Rate (1992): £2850 (US $4560). Two-year Institutional Rate (1992/93): £5415 (US $8664). (To include *Tetrahedron: Asymmetry*.) Sterling prices are definitive. US dollar prices are quoted for convenience only, and are subject to exchange rate fluctuation. Prices include postage and insurance and are subject to change without notice.
Subscription rates for Japan are available on request.

Specially Reduced Rates to Individuals

In the interests of maximising the dissemination of the research results published in this important international journal we have established a two-tier price structure. Any individual whose institution takes out a library subscription, including *Tetrahedron: Asymmetry*, may purchase a second or additional subscription for personal use; rates available from your nearest Pergamon office. Prices are subject to change without notice.

Microform Subscriptions and Back Issues

Back issues of all previously published volumes are available direct from Pergamon Press offices.

The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials. ANSI Z39.48-1984.

The Item-Fee Code for this publication is: 0040-4020/91 $3.00 + .00

Copyright © 1991 Pergamon Press plc

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. However, assignment of copyright is not required from authors who work for organisations which do not permit such assignment. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

Photocopying Information for Users in the USA

The Item-Fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyright holder for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service provided the stated fee for copying, beyond that permitted by Section 107 or 108 of the United States Copyright Law, is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearance Center Inc., 27 Congress Street, Salem, MA 01970.

Permission for Other Use

The copyright owner's permission does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

Subject Index 1991

Corrigenda
Banerjee A.K., Acevedo J.C., Gonzalez R. and Rojas A. :**42**,2081 (1991): authors regret they did not explicitly mention the contributions by Ourisson *et al* in "enone–benzene rearrangement" 15641
Fernandez J.J., Gonzalez R., Rodriguez M.L., Ruiz–perez C and Rodriguez–Romero V. : **46**, 8237(1990): p.8293, absolute configuration at carbon C–4 should be *R* and not *S*, 4221
Iwamoto K., Araki K. and Shinkai S. :**47**,4325(1991): Table 2,p.4327 has been corrected, 7179
Jager V., Schroter D.and Koppenhoefer B.: **47**, 2195(1991): date of receipt has been corrected, 4787
Marchand A.P., Annapurna P., Taylor R.W., Simmons D.L., Watson, Nagl A., Flippen–Anderson J.L., Gilardi R. and George C.: **46**,5077 (1990): p.5077 list of authors should include Kashyap A.P., 907
Szantay C.,Balazs M. Bolcskei H. and Szantay C.: **47**,1265(1991): incorrectly numbered compds in Table 2 have been corrected, 2923
Vacca J,P., deSolms S.J., Huff J.R., Billington D.C., Baker R.,Kulagowski J.J. and Mawer : 455679(1989):p.568211Lwas more polar and **11D** less polar; **15D**had positive rotation of 1.1°while unnatural isomer had negative rotation; p.5693, analytical data for **16D** and **1 16L** were reversed; **16D** had m.p.289– 320 and rotation –31.0°, 907

Acetals see also Thioacetals
2–nitro– and 3–nitro– 2–cyclohexenone acetals, prep and formation of highly functionalised intermediates, 2027
acylketene–, achiral and enantiomerically pure, prep and react– ivity, 975
alkylssilylketene–,via addition $\alpha\beta$– unsat esters to Grignard reagents, 8331
as precursors of vinyl ethers, use in isoprenoid chain elongation by Claisen rearrangements, 6521
cyclopropanone–, synthesis of 1–aminocyclopropane carboxylic acid 6265
hydroxydihydrofuran acetal fragments of azadirachtin anti–feedant from *Azadirachta indica*, synthesis for bio– logical evaluation, 6813
Pd–mediated intramolecular formation and prep substrate from D–glucose, synthesis enantiomeric paniculide B, 7259
tetrahydropyran and tetrahydrofuran–, prep from 2–phenyl– sulfonyl cyclic ethers, 1329vinylketene–, enantiomerically pure, as diastereoselective dienes in Diels–Alder reaction , catalysis and facial selectivity, 4519
vinlyketene–, enantionerically pure, asdiastereoselective dienes in Diels–Alder reactions, catalysis and facial selectivity, 4519

Acylation
direct–, O–methyl–3–stannyl tetronates, 8285
intramolecular–, *m*–trimethylsilyl–*m*–alkenoyl chlorides, vinylsilane term– inated, prep 4– and 6–membered cyclic ketones, 8111
stereoselective acetylations, silylenol ethers via norephe– drine derived oxa– zolidines, 7925
unprotected sugars, synthesis of 6–O–acyl–D–glycopyranoses and methyl–6– O–acyl–D– glycopyranosides, 3817

Addition reactions see also cycloaddition
5–oxo–9–decanal, Luche–Barbier selective addition to aldehyde with allyl or propargyl bromide, 1985
and substitution mechanism, photosubstitution of aromatic and heteroaromatic rings, 5029
and substitutions at π–systems, role of high press, Report, 8463
bromine toβ'–(functional alkyl) $\alpha\beta$–unsat esters, stereo– selective synthesis of β–halo derivs, 9621
carbenium ions to nonconjugated dienes, retarding (–I)effect of second double bond, 219
conjugate–, haloethanol to chromone heteroannulation of 4–oxo–4H–1–benzo–pyrans, 9431
decarboxylative radical–, to vinyl– sulphones and vinylphosphonium bromide, transformations of geminal (pyridine–2–thiyl) phenylsulphones, 7091
di–addition, Friedel–Crafts reaction of ethene with acid chlorides, 4991
diastereoselective–, organoCu reagents to 2–*exo*–bornyl– crotonates, 9691
effect of ion pairs within active sites of enzymes on reaction rates, 2617
enantioselective–, diethylzinc to aldehydes,2–[(*S*)– 2–pyrrolidinyl]pyridine catalyst, 8251
Grignard reagents to $\alpha\beta$–unsat esters, prep alkylsolylketene acetals, 8331
heteroconjugate–, acetylenic derivs, diastereoselectivity, 3727
iodine atom transfer–, alkyl iodides to alkynes, 6171
iodine atom transfer–, α–iodocarbonyls to alkynes, precursors for radical trans– location, 6189

Michael–, 2',3' modified uridine derivs from 2',3'–ene–2'–phenylselenonyl uridine, 3431
Michael–, enol silyl ethers, organotin triflate as catalyst, 9773
nucleophiles to chiral propionaldehyde, chloroacetaldehyde and 2–chloroprop– ionaldehyde, cal–ulated transition states, 9005
nucleophilic–, quinones, Report, 8043
nucleophilic–, to chiral carbonyl compds, origin π–facial diastereoselectivity, 8991, 9005
or substitution, reaction of 1,4–dinitrobenzene with t–butylmagnesium chloride, 1091
oxidative coupling, DOPA with resorc– inol and phloro–glucinol, adducts with tetrahydro–methanebenzofuro[,2,3–*d*]azocin e skeleton, 6243
oxidative–, Co–acetate promoted, 1,3– dicarbonyl compds to alkenes under aerobic conditions, 6457
P–chloro(bistrimethylsilyl)methyle ne phosphine with dienes, 71
photo–, benzophenone to allenic esters 2211
phthalimidosulphenyl chloride to alkynes, synthesis of unusual thiirane derivs, 7185
regioselective butrylation of sec OH groups, D–and L–galacto and mannopyranosides, 103
stannylmetallation, conjugated enynes, 1163
stereoselective–, organo–Cu reagents to N–acyliminium ions, prep of *trans*– 2,5–disubstit pyrrolidines, 573
stereoselective–, R2CuLi to ortho–substit methyl cinnamates, intra– molecular assistance and solvent effects, 4739
syn–selective *Michael* reaction of enamines with 2–(1–alkenyl)–1,3–dioxolan–2–yl– ium cations *in situ* generated from 2,2–dimethoxyethyl 2–alkenoates, 3737
t–butylcyanoketene to silyl enol ethers and conjugated dienes, 3845
to C=C double bond of (*R*)–2–hydroxy–3–enoic acids, 9035
trialkylsilyl and trialkylstannyl cuprates to β–unsaturated enones, intermediate π–complexes, 1177

Aflotoxins
and related structures, regiocontrolled annulations, application of homogenous Pd catalysis, urethane tether and o,o–diiodine effect, 9357

Agonists
α– and β–adreno–ceptor–,chirality, Report, 9953

Alcohols see also Amino alcohols
α–allenic–, via syn or anti opening of propargylic epoxides, 1677
2–alkanols, branched and unbranched, resolution using porcine pancreatic lipase, 1611
cyclopropanols and allyl alcohols via reaction of trialkyl–stannylmethyllithium with αβ–epoxy–, and α–chloro ketones, 3281
dehydration with triphenylphosphine–CCl4, D–isotope studies, 949
divinylcarbinol, asymmetric Sharpless epoxidation, *erythro*–D– and L–4–penten–itols by hydrolysis of epoxy–4–pentenols, 2195
ex–cell indirect electrooxidation, anodic generation of polybromochloride ions as controlled oxidising agents, 887
hexafluoroisopropanol for rearrangements via zwitterionic intermediates, 6725
O–sulfinylation with methanesulfonyl cyanide or p–toluene sulfonyl chloride, 9167
optically active sec–, via enzymatic hydrolysis and chemical transform– ation, 8701
propargyl–, 3C– ethynyl–1,2,5,6–di–O–isopropylidene α–D–allofuranose derivs, effect intra– molecular oxygens on LAH reduction, 6975
sec–, resolution by enzyme–catalysed tranesterification in alkyl carboxylates as solvents, 7645
via baker's yeast reduction of 1,3–dioxin–4–ones with chiral oxoalkyl groups at 6–position, EPC synthesis, 6197

Alcoholysis
acid–catalyzed–, trivalent phosphorus acid amides, 9839

Aldehydes see also Amino aldehydes, carbonyl compds
2,3–O–isopropylidene–D–glyceral dehyde and [(η5–C5H5)Fe (CO)–PPh3)COCH 3] derived enolates, aldol reaction, 10077
3–methylfumaric and maleic ester mono aldehydes as NEPH derived oxazolidines, asymmetric hydrogenation, 7357
4–pentenals, substit, asymmetric cyclisation, into cyclo–pentanone derivs by Rh with chiral ligands 4879
achiral and chiral–, diastereoselective condensation with directly generated titanium enolates of activated esters, 7897
aromatic–, C2–homolo gation via 5–hydroxy isoxazolidines, 4121
aromatic–, direct formation of N–phosphinoyl–and N–sulphonylimines, 5561
aromatic–, reaction with indole, synthesis of diindolylmeth–anes, 9225
benzaldehydes, substit, reactions with 3,3–dichloroallyl metals, effect of cations onregiosel–ectivity control, 1485
chiral propion– aldehyde, chloro–acetaldehyde and 2–chloropropionaldehyde, addition to nucleophiles, calcu–lated transition states, 9005
enantioselective addition to methyl– zinc, 2–[(2*S*)–2–pyrrolidinyl]pyridine catalyst, 8251
furan–3–aldehyde and corresponding furoyl α–radical, conform– ation and stereo–dynamics, 6427
methacrolein and ethylacrolein acylhydrazones, intramolecular and intermolecular Diels–Alder reactions, 10053
optically active β–siloxy–, via organo–Al catalyzed rearrangement of epoxides, 6983
pinacol cross coupling, vanadium promoted, enantio– and dia–stereoselective synthesis of 1,2–diols, 5737
propionaldehyde, chloroacetaldehyde and 2–chloropropionaldehyde, conformational rotational profiles, 8991
reaction with nitrilium salts, prep of N–acyliminium salts, 205
reversible reaction with benzotriazole, Report, 2683

stereoselective Reformatsky reactions with 3–(2–bromopropionyl)–2–oxazol idone derivs, 2821
tartraldehyde mercaptans, synthesis of D– and L–diginose and –saremtose, 1541
tartraldehydes, synthesis of N–benzoyl–L–ristosamine and L–acosomine, 7837

Aldol reactions
β–hydroxy–α–amino acids, synthesis using chiral phase transfer catalyst, 5367
between 3–keto and aldehyde sugars, stereoselectivity, 189
between enolates from [(η5–C5H5)Fe(CO)–PPh3)COCH3] and 2,3–O– isopropylidene–D–glyceraldehyde, 10077
chiral boron enolate aldol reactions, stereoselectivity, computational study using transition state modelling, 3471
diastereoselective–, directly generated titanium enolates of activated esters with aldehydes, 7897
*erythro*selective–, between tricarbonyl (*o*–trimethylsilybenzaldehyde deriv)–Cr complexes and cyclic silyl enol ethers, 3007

Alkaloids
(±)–tetraponerine–8, stereoselective synthesis, 3805
(+)–monomorine I, synthesis via nitrone cycloaddition route, 9329
(–)–ruspolinone, total synthesis, 7179
15–azayohimban, new ring system, synthesis, 1065
21–epimer of 20–deethyl–3,17–dioxo–16–ethoxyc arbonyl–1–methylaspidospermid ine, synthesis, 4165
aspidosperma–, enantiomerically pure tetracyclic(ABCE) ring system, syn– thesis, 4155
bis isoquinoline quinone–, saframycin synthetic studies, 5643
bromotyrosine–, purealidins B and C from *Psammaplysilla purea*, isolation and structure, 6617
cycloprotobuxine–A (3β–20*R*–chiralty) and isomeric compds with 3β,20*R*– and 3α,20*R*–configuration, synthesis from lanosterol, 2957
decahydroquinoline–, lepadin A from *Clavelina lepadiformis*, 8729
ellipticine, C–11 substit, synthesis of 6H–pyrido[4,3–*b*]carbazoles, 6539
ervitsine and its 20–deethylidene–6,16–dihydroa nalog, tetracyclic skeleton, synthesis, 5585
Eryhthrophleum–, analogs, synthesis and Na+K+–ATPase activity, 7965
Erythrophleum–, analogs, phenan–threnone precursors, 7951
from dendrobatid poison frogs, further *cis*–decahydroquinolines and 8–methylindolizidines 5401
from dendrobatid poison frogs, further pumiliotoxins and allopumiliotoxins and reassignment of the keto function in pumiliotoxin 307F, 5415
iboga analogs, via electrophilic cycli– sation of methyl 6–(2–indolyl)–2–azabicyclooct–7–ene–6–carboxylates, im–proved reaction, 5673
indole–, logic for structure detn, 3655
indole–,N–(7–alkyl–4–indolyl)–N–methyl–L–valine esters, method for teleocidin intermediates, 8535
indole–, ngouniensine and epingouniensine, synthetic studies, 5507
indolocarbazole–, structures of Tan–1030 and Tan–999 by NMR, 3565
indolo[2,3–a]carbazole N–glycosides, tjipanazoles from *Tolypothrix tjipanasensis*, 7739
macroline–type–,talcarpine and alstonerine from ajmaline, 1383
macroxine–a from *Alstonia macrophylla*, 3129
manzamine A1, homochiral 'tricyclic heart', synthesis, 2005
manzamine C and geometrical isomer, synthesis, 8067
monoterpenoids, synthesis of (±)–epi–7,7a–tecomanine, 9195
morphine structure, efficient route to hexahydrodibenzofuran derivs, 6681
norditerpenoid–, NMR studies of delpheline, 8,9–methylene–dioxylappaconitine and dictyzine 4299
norruspoline and ruspolinone, synthesis, 1311
protoberberine–, oxidation stage chemistry, synthesis of7,8–dehydro– berbines, 5841
pyrrolizidine–, asymmetric synthesis of (–)–supinidine, 7635
quinolizidine–, biomimetic synthesis, 8431
sanguinarine and indole–, biosynthesis, enzymology and molecular biology, 5945
sesbania–, thesis of acyclic analogues of sesbanimides A and B, 6787
solanaceous–, metabolism in transgenic plant teratomas integrated with genetically engineered genes, 5955
Strychnos indole–, sythetic study, 5269
synthesis,A–2–teleocidin, lyngbyatoxin A, pendolmycin and (*R*,*E*)– and (*S*,*E*)–7–(3,7,11–trimethyl–1,6,10–dodeca triene–3– yl)–(–)–indolactams, 8545
synthesis, dihydroteleocidin B, teleocidin B–3, and teleocidin B–4, 8559
taxine B, taxane hemisynthesis, 9823
trans–2,5–disubstit pyrrolidines via stereoselective addition, organo–Cu reagents to N–acyl–iminium ions, 573
vinca–, and related compds, synthesis of (±)–desmethoxy cuanzine, 271
vinca–, structure and prep of 15',20'– anhydrovinblastine borane complex, 1265

Alkanes
and in prim, sec and tert alkyl radicals, stabilization effects, 6777
oxidation by H2O2 in pyridine catalyzed Cu complexes, Gif–type reaction, 6561

Alkenes see also Olefins
and chiral chloro– nitroso sugar derivs, asymmetric synthesis of prim amines, 3313
electro–fluorination, in amine–HF, 705
electron rich–, reaction with azo alkenes derived from hydrazones of ethyl bromopyruvate, 5615
electrophilic–, vicarious nucleophilic substitution of hydrogen, 5001
ethene, cycloadducts with2(1H)pyrazinone, reduction to 2,5–diazabicyclo–[2.2.2]–octan–3–ones, 9269
ethene, Friedel–Crafts reaction with acid chlorides, di–addition and molecular rearrangement, 4991
ethoxyethenyl group, introduction into aromatic and hetereoaromatic rings, 1877
isotactic polymethoxy–1– alkenes from *Scytonema ocellatum*, structure and synthesis, 4889
oxidation by chiral non–porphyrinic catalyst based on bleomycin–Fe complex, 1191
propene, reactions with singlet oxygen and enophiles, PM3 study, 1707

Alkenylation
methylenation, aldonolactones, access to carbohydrates, 1655

Alkenyl halides
4,4–difluorocyclohexadienone, chemistry, 705

Alkoxylation
anodic methoxylation and acetoxylation, arylfluoroalkylsulfides, 625

Alkylation
acetylation conditions, reactions of flavonoid thiosemicarbazones, 9305
and protonation, chiral Schiff bases, diastereoselectivity of reactants, 4611
angular–, tricyclodecadienone ester with alkyl halides, 1495
biomimetic transalkylation of olefins via sulfonium salts, 6939
direct–, prep monoalkylated calix[4]– arenes, 8379
DNA–, properties of (+)–CC–1065, analogs and duo–carmycins, generation of singly 5'–^{32}P– end–labelled double stranded DNA for binding based on M13 cloning, 2661
electrochemical trifluoromethylation of olefins, mech– anism and product selectivity, 555
homolytic–, naphtho– quinone and methylnaphthoquinone, enthalpic, steric and polar effects, 7343
internal–, N–,O– and S–heterocyclic β– keto esters, free radical ring–ex pansion, 4847
N–acetamidomalonate anions, effect of F substit on reactivity of alkylating moieties, 1001
oxidative formylation and chloro–methylation, O–and S–heterocyclic ketones in Vilsmeier reactions, 1303
proteins and nucleic acid using 4–acetoxy–7–methoxy–2H–1,4–be nzoxazin–3(4 H)–one, 1837
SN2–, bicyclic allylic esters with Zn–Cu reagents, synthesis of isocarbocyclin, 1861
stereodifferential–, bicyclic lactams, Report, 9503

Alkyl halides
1,1–diphenyl–2–haloethenes, photo– reduction by metal hydrides, 9071
alkyl iodides, iodine atom transfer addition to alkynes, 6171
polyhaloalkanes C,H2i+2–jXj, numbers of constitutions, configurations, chiral and achiral configurations, 2969

Alkynes see also Enynes,
acetylenic derivs, diastereoselectivity in heteroconjugate addition, 3727
amphiphilic diacetylenes with amino or ammonium functionality, synthesis, 9947
an acetylene, intramolecular cycloaddition to carbonyl ylide, synthesis 2H,4H and 9bH–furo[3,2–c]benzopyrans, 7713
arylsulfonyl substit–, cycloaddition with diazopropane, route to prep of arylsulfonyl substit cyclopropenes, 6139
diarylacetylenes and diaryldiacetylenes, anodic oxidation, synthesis diaroyl–stilbenes and acetylenic α– and γ–diketones, 799
iodine atom transfer addition of alkyl iodides, 6171
iodine atom transfer addition of α–iodo–carbonyls, precursors for radical trans– location, 6189

Alkynyl halides
lithium, sodium and potassium chloroallyl systems, theoretical and experimental study, 8739

Allenes
Co–acetate promoted oxidative addition to 1,3–dicarbonyl compds under aerobic conditions, 6457

Allomones
5,5'–dihydroxyleucine and 4–fluoro–deriv via reduction of 4–carboxyglutamic and 4–carbethoxy– 4–fluoroglutamic acids, 1001

Aluminium compounds
A1–NiC12.6H2O–THF for selective re– duction of organic functional groups, 8587
aluminium enolates, zinc chloride induced thioalkylation, syn–thesis estradiol–3–methyl–17–t–butyl diether, 7583
organo–, catalyzed rearrangement of epoxides, route to optically active β–siloxy aldehydes, 6983
organo–, induced ring–opening of epoxypyranosides, synthesis and structure of γ–hydroxy–isoleucine stereoisomers and corresponding lactones, 6469
organo–, induced ring–opening of epoxypyranosides, synthesis of antimycin A3 and (+)–blastmycinone, 6483
sodium bis(2– methoxysthoxy) (1,1,1,3,3,3–hexafluoro–2–propo xy)aluminum hydride, stereo–selective reducing agent in a carbacyclin synthesis, 2773

Amidation
acyl–„ concerted mechanism, syn–stereospecificity of reaction, 5577
arylamidation, guanine ring by carcinogen linked to guanosine moiety, 5725
enzymatic trans–, and aminolysis reactions, 9207

Amides
17α–alkylnylamide derivs of estradiol with side chains of various lengths at position 15, 7751
4–acetamidoanilides, L–arginine, *p*–guanidino–L–phenylalanine, L–lysine, N2[D– fructos–3–O–yl and D–glucos–3–O–yl]—acetyl–L–l ysine, potential acrosin inhibitors, 8831
carboxamides, N–monosubstit, hydrolysis (without epimerisation) via intramolecular N–O acyl migration in acetoxypivalimides, 3925
chiral–, via(±)–2–chloropropionate and amines catalysed by lipase, 9207
cyclic–, 4–membered, 3–amino–2–azetidinones, leterature survey, Report, 7503
in situ prep via electro generation of acyloxytri–phenylphosphonium ions, 767
macrocyclic maytansinoids, C–3 to C–10 portion, synthesis, 4133
phthalides, via single or double β–scission of alkoxyl radicals generated from 1–ethylbenzo–cyclobuten–1–ols and from 1,3–dihydro–isobenzofuran–1–ols, 5437
trivalent phosphorus acid–, nature of acid–catalyzed alcoholysis, 9839

Amidines
N–arylsulfonyl–, rearrangement, synthesis of enamines, β–amino– sulfonyl–enamines and 4H–thiazete– S,S–dioxides, 1937

Amido ketones
β–amido ketones, (*R*)–1 and (*S*)–2, reduction giving amido alcohols with like or unlike configuration, 1895

Amination
allylic–, promoted by copper, 9449

Amines see also Enamines
β–chloroamines, synthesis by electro– philic reduction of α–chloroimines, 3407
2,2–dialkylcyclopropylamines, synthesis from β–chloroimines and synthesis of 1–amino–2,2–dialkylcyclopropa necarboxylic acids, 3389

2–alkenyl anilines, via conversion of benzothiazines, 8855
2–*endo*–aminonorbornenes, 2–*exo*–substit from 2–acetamido–norbornene–2–carboxylic acids, 541
4(7)–aminobenzimidazole, reactivity as bidentate nucleophile, 7459
amphiphilic diacetylenes with amino or ammonium function–ality, synthesis, 9947
aniline peroxidase–mediated oxidation, M.O.techniques, 7525
anilines, electrosynthetic aspects of anodic reactions, 737
annulation of 6– and 7–membered rings, 583
aqueous–, use in deprotection of oligonucleotides, 2603
catecholamines, mechanism of acid–catalysed–racemisation, 5019
cis–1,2– and *cis*–2,3–diaminotetralin, prep of anticonvulsants related to U–54494, 6157
N–allylamines via microbial reduction of N–allylhydroxyl–amines using *Clostridia*, 3329
N–tosyl oxiranepropylamines, cyclisation synthesis of function– alised pyrrolidines, 3075
oxidation with arenesulfonyl peroxides, Report, 1109
polyfunctional–, synthesis via Bt–CHR–NR'R'', prep and alkylation of hydroxylamines, hydrazines, amides, Report, 2683
prim–, reaction with 6–O–substit hexoses, 5,6–dihydro–3,5–dihydroxy–4H –pyridones – new Maillard products, 9351
primary–, asymmetric synthesis from alkenes and chiral chloronitroso sugar derivs, 3313
protection by TDE sulfenyl group, 8145
putrscine and cadaverine derivs, diamine oxidase oxidation, 507
reaction with dimethylcarbonate in presence of CO_2, prep methylcarb– amates, 9489
tert 2,4–dimethoxy–benzylamines, prep and use in synthesis of sec amines, 4591
tert–aromatic–, N–dealkylation–N–nitrosation by n–butyl– nitrite, 7845
unsym vicinal diamines, conversion 1,2–aminoazides by catalytic hydrogenation or reductive alkylation, 8177
via rearrangement of hexahydro–(1H)–2–benzazonini um ylides in liquid ammonia, 47

Aminium salts
radicals, electrogenerated, cycli–sationto 11–substit dibenzo[a,d]cycloheptenimineder ivs, 757

Amino acids
αα–dialkyl–, coupling using PyBOP and PyBroP compared with BOP and BroP, 259
α–, asymmetric synthesis from carbohydrates as chiral templates, Report, 6079
α–aryl–, via reaction of tricarbonyl–Cr–complexess with anions from Schiff bases of α–amino esters, 4619
α–CH_2CO_2H functalized tryptophan, synthesis and incorporation into analog of cholecyto– kinin, 4763
β–hydroxcy–α–amino acids via aldol condensation using chiral phase transfer catalyst, 5367
δ–L–α–aminoadipoyl–L–cysteiny l–D–valine, enzymatic conver–sion to isopenicillin N, monocyclic β– lactam involvement, 457
δ–L–α–aminoadpoyl–L–cysteinyl –D–allyl–glycine and 8 deuterated analogs, isopenicillin synthase action mechanism, 8203
γ–hydroxy–isoleucine stereoisomers and corresponding lactones, synthesis and structure, 6469
(2*R*)– and 2(*S*)–[1^{13}C]2–amino–2–methylmalon ic acid, synthesis, chiral substrates for serine hydroxymethyltransferase, 497
1–aminocyclopropanecarboxylic acid, syn– thesis from cyclo–propanone acetal, 6265
2,3–diamino acids, enantiomerically pure, synthesis via chiral imidazolidin– 2–ones, 2263
4–acetamidophenyl–, and 4–acetamido– anilides of L–arginine, *p*–guanidino L–phenylalanine, L–lysine, N_2[D– fructos–3–O–yl and D–glucos–3–O–yl]acetyl–L–lysi ne, potential acrosin inhibitors, 8831
4–carboxyglutamic and 4–carboxy–4– fluoroglutamic acids, reduction to 5,5'–dihydroxyleucine and 4–fluoro–5,5'–dihydroxyleucine, 1001
α–amino acids, N–bis–silylation. "benzostabases" as amino protecting group, 9807
analysis, applications of ninhydrin and analogs, Report, 8791
arginine, trifluoroacetic acid labile protecting group for guanidine side–chain function, prep of N^G–2,2,5,7,8–pentamethylchro man–6–sulphonyl–L–arginine, 6253
clavalanine, structure and abs stereo– chemistry, Report, 6079
cyclic α–amino acids, prep via glycine cations, 4039
deuterated analogs
δ–L–α–aminoadipoyl–L–cystei nyl–D–allylglycine, conversion to β–lactam metabolites, 8223
dibromotyrosine derivs, new from *Pseudoceratina crassa*, 1809
domoic acid, C–8 side chain, synthesis, 155
DOPA, oxidative coupling with resorcinol and phloroglucinol, adducts with tetrahydromethanebenzofuro[,2,3–*d*]azocine skeleton, 6243
Fe–bleomycin, polynucleotide recognition and strand scission, 2463
gastroprotective substance AI–77–B from *Bacillus pumilus* AI–77, synthesis, 8635
glycine cation equivs, formic acid–induced π–cyclisation to substit pipecolic acid derivs, 4063
indolactam analogs by microbial conversion, 5453
L–cysteic acid and and L–cysteine from L–cystine, 877
N–α–Boc–N–ε–tribenzyl EDTA–L–lysine, synthesis for place– ment of EDTA at any unique position in peptide chain, 2535
natural L–α–, and peptides, synthesis of phospha–C peptides, 1239
non–natural–, structural requirements for biosynthetic incorp– oration into poly–ptides, 2389
potential chiral electrophilic equivalents, prep, 563
psammaplin derivs from *Psammaplysilla purpurea*, 2097
pyrrolizidine–, with carboxylic group at C–3, isolation of 7A–epialexaflorine from *Alexa grandiflora*, 5637

Amino acid esters

α-(α-aminoalkyl)acrylates, N-protected, kinetic resolution and carbamate-directed hydrogenation, 8869

α-, anions from Schiff bases, enantio- selective synthesis of α-arylamino acids via reaction with tricarbonyl-Cr-complexes, 4619

N-(7-alkyl-4-indolyl)-N-methyl -L-valine esters, method for teleocidin inter- mediates, 8535

N-methyl-α-amino-, asymmetric synthesis from glyoxal derived chiral heterocycle, 4343

Amino alcohols

β-amino-alcohol-N-oxide derivs, use in synthesis of 2,3 or 4-alkyl substit NH pyrrolidines, 5161

1,2- and 1,3-, prep and use in enantio- selective reduction of acetophenone and anti-acetophenone oxime methyl ether with borane, 4941

1,3-, with pyrrolidin structure via hydrolysis of amido alcohols formed by reduction of (*R*)-1 and (*S*)-2-β-amido ketones, 1895

D-*erythro*-sphingosine, synthesis, 2835

norephedrine derived oxazolidines, acetylation of stereogenic silylenolethers, 7925

Amino aldehyes

α-, cycloaddition of activated dienes, effect of N-protecting groups on stereochemistry, 1053

α-, [4+2] cycloaddition to activated dienes, effect of N-protecting groups, 1053

D-threoninals and D-*allo*-threoninals, N,O-protected, highpressure [4+2]cycloaddition to 1-methoxy-1,3-butadiene, 1037

D-threoninals and D-*allo*-threoninals, N,O-protected, cycloaddition to 1-benzoyloxy-2-t-butyldimethy lsiloxy-4-methoxy-1,3-butadie ne, 1045

Amino ketones

α-amino ketones via asymmetric formation of C-N bonds in chiral enol ethers, 5877

bicyclic α-and β-, retro-Michael ring opening to 2-aryl-cyclohexenones, 4417

Amino sugars

3-amino-2,3-dideoxy-D-*erythro*-furanose derivs, via conversion of D-xylose to 3-nitro-2,3-dideoxy-D-*erythro* -furanoside, 4861

6-O-(aminoethyl)-D,L-myo-inositol-1,2-cyclic phosphate, putative insulin second messenger, synthesis, 21

D- and L-diginose and -sarmentose, synthesis from tartraldehyde mercaptans, 1541

galactosamine-containing oligosaccharides, biologically important, stereoselective synthesis of protected precursors, 5149

glycoamino acids and dipeptides via anodically produced phenoxenium ions, 645

hexosamine-inositol phosphates related to putative insulin mediators, 1

N-benzoyl-L-ristosamine and -L- acosamine, synthesis, 7837

Aminolysis

enzymatic-, and transamidation reactions, 9207

Ammonium salts

amphiphilic diacetylenes with amino or ammonium funct- ionality, synthesis, 9947

quaternary salts under phase transfer conditions, effect of anion hydration on selectivity coeffs (k_Y/k_X^{sel}), 1285

Annulation

2-cyclohexen-1-one-, stereocontrolled synthesis of hydroxylated tricyclic systems, 5491

6- and 7-membered rings onto amines, 583

hetero-, 4-oxo-4H-1-benzopyrans via conjugate addition haloalkanols in presence of base, 9431

leading to bicyclic dienes, via intramolecular Pd- catalysed coupling of enol triflate and vinylstannane functions, 4555

pyrido-, by tandem Wittig/elctrocyclic ring-closure, prep of pyrazolo[4,3-*c*)- and pyrazolo[3,4-*c*]pyridine derivs, 6737

regiocontrolled-, o,o'-diiodine effect coupled with urethane tether, Pd-catalysed hydroarylation o-iodophenoxyfuranones to ABC structures of AFM1 and austocystine, 9357

regioselective-, imino-phosphorane-mediated, 1,3,4-thiadiazole ring into 1,2,4-triazine ring, prep of mesoionic compds derived from [1,3,4] thiadiazolo]2,3-*c*]- and [1,3,4]thia-diazolo[3,2-*d*][1,2,4]triazines, 6747

via N-acylimminium ion-enamide tautomers, bicyclic lactams, Report, 9503

Antagonists

α- and β-adreno- ceptor-, chiralty, Report, 9953

aldosterone-, synthesis 14,17-hetero-bridged 19-norsteroids, 7377

Anthocyanins

biflavanoid derivs, flavan-3-ols, and 4-arylflavan-3-ols, stereo-and regio- selective oxidation with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone, 6705

Antibiotics

β-lactam-, 3-amino-2-azetidinones, literature survey, Report, 7503

β-lactam-, enhanced activity in combin- ation with bulgecine, 6079

(+)-kjellmanianone, enantioselective synthesis, 173

(+)-thermozymocidin, synthesis, Report, 6079

1β-methylthienamycin, stereocontrolled approaches to key intermediate, 7117

actinorhodin, polyketide aldolase involved in form- ation, 6029

agglomerin A and (±)-carolinic acid synthesis, prep 3-acyl tetronic acid via O-methyl 3-stannyl tetronates, 8285

altemicidin, structure detn by NMR analyses, 3621

antimycin A1 synthesis of rac 2-hexyl-3-hydroxy-4-pentanolide (NFX-2) and its optical resolution, 6623

antimycin A3 and (+)-blastmycinone, synthesis via organo-Al induced ring-opening of epoxypyranosides, 6483

benzoisochromanequinone-, biosynthesis of kalafungin, genetic studies, 6059

bis isoquinoline quinone-, synthesis of rac saframycin B, 5643

dihydrosarkomycins and cyclopentenoids, synthesis via 2-alkyl-3-carbethoxy-cyclopent adienones from angularly alkylated tricyclo- [5.2.1.$0^{2,6}$] decadienones, 1509

erythromycine A and B, synthesis of aglycones and prep of C1-C10 and C11-C13 segments starting from levo- glucosane, 2291

erythronolides A and B, synthesis in (C5-C9)+(C3-C4)+(C1-C2)+(C11-C13) sequence from 1,6-anhydro-β-D-glucopyranose, 2317

glidobactin-, synthesis of core structure glidobamine, 6251

hybrid-, genetic engineering report, 6045- a progress report 6045

ionomycin, synthesis of C–2 to C–15 fragment, 2733
marine–, aplasmo– mycin, structural study, 3511
N–benzoyl–L–ristosamine and L–acosamine, synthesis, 7837
natural alahopcin, stereospecific synthesis, 5835
new macrocyclic lactone RP 63834, structure, 61
quinocarcin tetracyclic analogs, synthesis, conformation, crystal structures and DNA cleavage abilities, 2629
salinomycin and narasin, alkali metal salts, complete assignment ^{1}H and ^{13}C NMR, 10109
sarubicin A biosynthesis, synthesis advanced intermediates, 7209
sinefungin, bio– synthesis study using a cell–free system, 6069
TAN–950, *structure and* isolation from *Streptomyces platensis, 8079*
thienamycin and (+)–PS–5 synthesis, 531

Anticoagulants
catalysis, improved by substrate attenuation, 2503
monoclonal–, with sequence specific affinity for a stem–loop structure in DNA, 2563

Anticonvulsants
related to U–54494 prep from *cis*–1,2– and *cis*–2,3–diamino–tetralin, 6157

Antiestrogenic agents
17β–estradiol derivs withN–butyl, N– methyl alkylamide side chain at position 15, 7751

Antifungal agents
camalexin produced in leaves of *Camelina sativa*, 3909
econazole nitrate and miconazole nitrate, characterization of autoxidation products, 6549
papulacandin–, L–687,781
β–1,3–glucan synthesis inhibitor, structure, 7563
restricticin from *Penicillium restrictum*, 3915
TAN–950, structure and isolation from *Streptomyces platensis*, 8079
tjipanazoles, N–glycosides from *Tolypothrix tjipanasensis*, 7739

Anti–HIV agents
3'–α–fluoro– and 3'–α–azido–thymidines, structure by NMR and MM2 calculations, 7363
dideoxyisosine and dideoxyguanosine isosteres, prep, 8949

Antimitotic agents
ellipticine, C–11 substit, synthesis of 6H–pyrido[4,3–*b*]carbazoles, 6539

Antioxidants
new–, incorporating indole and indoline chromophores, 4383

Antitumor agents
extractive and 5'–desmethoxy niranthin, synthesis, 8931

Arenes
1,3,5– and 1,2,4–trimethoxybenzenes, polylithiation, 9279
1,4–dinitrobenzene, reaction witht–butyl magnesium chloride, 1091
aromatic rings, trans– ition metal mediated thiation, 8621
benzene, duel electro– synthesis of *p*– benzoquinone, 841
benzene, pentacyclic dimer, prep of seco–[6]–prismane, 7783
ethynlarenes, Pd–catalysed carbonylative coupling with 2–hydroxyaryl iodides, regio–chemistry, 6449
photosubstitution of–, addition and substit mechanism, 5029

Aromatisation
cyclo–, α–oxoketene dithioacetals and β–oxodithioacetals with benzyl–, 1–(naphthylmethyl) and 2–(naphthylmethyl)–magnesium halides, synthesis of con– densed polynuclear aromatic hydro– carbons, 3499

Aryl halides
2–hydroxyaryl iodides, Pd–catalysed carbonylative coupling with ethynlarenes, regiochemistry, 6449
aryl bromides, Pd–catalysed cross coupling with (*Z*)–1–ethoxy–2–tributylstannyle thene, construction of condensed heteroaromatics, 1877
benzylidene dichlorides, *o,o*–dialkyl substit, NMR, unusual effects of steric hindrance, 5237
chlorobenzene, electro–fluorination in amine–HF, 705
perfluoroalkyl azaarenes with perfluoroalkyllithium–BF_3 system, synthesis, 6231
photosubstitution of–, addition and substitut mechanism, 5029
trichloromethylarenes, reductive condensation with hydrox–ylamine in pyridine, prep of nitriles or 3,5–diaryl–1,2,4–oxadiazoles, 447

Arylation
electron–rich aromatic compds with 3,6–di– methoxy–3,6–di–methylclohexa–1,4—diene, 313
potassium 2,4–pent– anedionate via SRN1 reaction with diazo–sulfides, 333
regioselective 3,6–di–methoxy–3,6–dimethylcyclohex a–1,4–diene α–arylation of ketones via silyl enol ethers, 9119
SRN1 C–arylation, phenols with azosulfides, prep dibenzo[b,d]pyran–6–ones, 9297

Asymmetric induction see also Enantiocontrol, Enantio–selection
β–amido ketones, (*R*)–1 and (*S*)–2, reduction giving amido alcohols with like or unlike con–figuration, 1895
formation of C–N bonds in chiral enol ethers, 5877

Asymmetric reactions
α–amino acids from carbohydrates as chiral templates, Report, 6079
(–)–ruspolinone, total synthesis, 7179
2,4–disubstit–3,3–difluorotetrahyd rofurans via intramolecular trapping difluoroalkyl radicals by tethered olefins, 9439
diastereoselective addition organo–CU reagents to 2–exo–bornyl crotonates, 9691
erythro–selective aldol reaction between tricarbonyl (*o*–tri–methylsilybenzaldehyde deriv)–Cr complexes and cyclic silyl enol ethers, 3007
H–transfer with chiral NADH models as function of config–uration and conformation, 9363
hydrogenation, 3–methylfumaric and maleic ester monoaldehydes as NEPH–derived oxazolidines, 7357
primary amines from alkenes and chiral chloronitroso sugar derivs, 3313
SPAC reaction, use of diasteromerically and optical pure sulfinyl– acetates, 6601
synthesis of (–)–supinidine, 7635
synthesis of D–*erythro*–sphingosine, 2835
synthesis of N–N–methyl α–amino ester from glyoxal derived chiral heterocycle, 4343
synthesis, hexoses and aza sugars branched at C(5), 9641

Asymmetry
introduction of chiral centre on C–6 of a carbohydrate unit, synthesis of C–2 to C–15 fragment of ionomycin 2733
stereochemical relationships in non–rigid mols, use of promolecules, 31

Autoxidation
antifungal econazole nitrate and micon– azole nitrate, characterization of products, 6549

Aza compounds
perfluoroalkyl aza– arenes with perfluoroalkyllithium–BF3 system, synthesis, 6231
rearranged azadirachtins, characterisation and structure activity relationships, 9231

Azepines
3H–azepin–2–ones and 6H–azep[ino[2,1–*b*]–quinazolin–12–ones via photo–induced ring expansions of aryl azides, 2277
natural and unnatural, synthesis, Report, 9131

Azetidinones
3,4–disubstit–, enan– tiospecific routes, 1137
3–amino–2–azetidinones, leterature survey, Report, 7503
4–acetoxy–3–[1–(t–butyldimethylsiloxy)ethyl]–2–a zetidinones via electrochemical oxidation, 531
azetidin–2–one ring formation, NMR, 7417
trans–3,4,4–substit azetidin–2–ones, synthesis from alkylthioimidates, 6759

Azides
1,2–aminoazides, conversion to unsym vicinal diamines by catalytic hydrogenation or reductive alkylation, 8177
aryl–, photoinduced ring expansion, prep of 3H–azepin–2–ones and 6H–azep[ino[2,1–*b*]–quinazolin–12–ones, 2277
kinetically controlled displacement on allylic chloride, synthesis of serotonin–3 receptor ligand prototype, 5391
trimethylsilyl–, regio and selective ring opening of epoxides in presence of aluminium and titanium isoprop– oxide, 1435

Aziridines
diastereoselective aziridination, asymmetric formation of C–N bonds in chiral enol ethers, 5877
naturally occurring (2*S*,3*S*)–(+)–aziridine–2,3–dicar boxylic acid, synthesis, 5287

Azo and azoxy compounds
azoalkenes(derived from hydrazones of ethyl bromo–pyruvate), reaction with electron rich alkenes and hetero– cycles, 5615
azosulfides, SRN1 C–arylation of phenols, prep dibenzo[b,d]pyran–6–ones, 9297

Azocines
natural and unnatural, synthesis, Report, 9131

Azomines
natural and unnatural, synthesis, Report, 9131

Azulenes
via anodic oxidation of cycloheptatriene systems, 593

Benzimidazoles
4(7)–amino–, reactivity as bidentate nucleophile, 7459

Benzofurans
hexahydrodibenzofuran derivs, efficient route, 6681

Benzofuroxans
1,2–alkylenedioxynitrobenzofuroxans, Boulton–Katritzky rearrangement, effect of heterocyclic side ring, 7157

Benzoquinones see Quinones

Benzothiazoles
5,6–dimethoxy–2–(4–methoxyphenyl)–benzothiazole, crystal–, molecular–structure and M.O. calcu– lations on related compds, 6493

Benzothiophenes
benzo[b]thiophenium S,C–ylides, prep, structure and comparison with thiophenium analogues, 8611

Benzoxazoles
dihydrobenzaxazoles via reaction of 4–alkylidene–5(4H)–oxazolones with ethyl 3–oxo–4–triphenylphosphoranylidene–butyrate, 8907

Betaines
2(3H)–benzoxazolones, regioselectivity in C–acylation, 6649

Bicyclic alicyclic compounds
1,2,3,4,5,6–*tris*–(bicyclo[2.2.2]octeno) tropylium ion, formation, properties, and reactions, 6951
bicyclo[2.2.2]oct–2–enes, endo *cis*–5,6–disubstit, reaction with diazomethane, 7699
chiral bicyclo[3.2.0]heptenes via rearrangement vinylcyclopropane–cyclopentene, syntheses (±)–grandisol and (–)–$\Delta^{9(12)}$–capnellene and antipode, 8259
cis–bicyclo[3.3.0]octane–1–carbonyl derivs by stereospecific re–arrangement1–chloro9–hydroxy bicyclo[3.3.1]nonanes, 9097
formation 7– and 8–membered rings, Mn–based tandem radical cyclisations, 8663
norbor(ne)nylmethanol enzymatic resolution in organic media, application to synthesis of (+)–and (–)–*endo*–norbornene lactone, 5513

Bicyclic heterocyclic compds see also Heterocyclic ring systems
(–)–frontalin and (–)–malyngolide via epoxyketone re–arrangement, 6967
2,5–diazabicyclo[2.2.2]octan–3–ones via reduction of cyclo–adducts of ethene with 2(1H)pyraz– inones, 9269
3,3'–diamino–2,2'–bi–1,4–naphtho – quinonyl, photolysis, 8373
6–acetyl–2,4–diamino–7,8–dihydro–9*H*–pyrimido[4,5–*b*][1,4]diazepine, synthesis using furazano[3,4–*d*]pyrimidine precursor, 5259
amino–azabicyclo[3.1.0]hexane diastereomers from chloro–enamines and borohydride, 8133
bicyclic heteroaromatics, prep via 5–(tributylstannyl)isoxazoles, 5111
bicyclic lactamdione via oxidative cleavage tricyclic pyridone, 9981
bridged 2,2'–bipyridines and 2,2':6,2''–terpyridine Report, 6851
imidazo[1,2–*a*]pyridine derivs and 2–nitro– propane, SRN1 reaction, prep of pharmacologially important compds, 5173
methyl 6–(2–methyl)–2–azabicyclooct–7–ene–6–carboxylates, electrophilic cyclisation to iboga alkaloid analogs, improved reaction, 5673
triazolopyridine ylides derived from 2–acyl–methyltriazolopyridinium salts, 5277

Bidentate
nucleophile, 4(7)–aminobenzimidazole reactivity, 7459

Biologically active compounds
4–cyan0–2,3–diphenyl=2H–pyrrol–5–thione, synthesis and reactions, 8243
4–cyan0–2,3–diphenyl=2H–pyrrol–5–thione, synthesis and reactions, 8243
A–2–teleocidin, lyngbyatoxin A, pendolmycin and (*R*,*E*)– and (*S*,*E*)–7–(3,7,11–trimethyl–1,6,10–dodecatrien– 3–yl)–(–)–indolactam 8545
agglomerin A and (±)–carolinic acid synthesis, prep 3–acyl tetronic acid via O–methyl 3–stannyl tetronates, 8285
both enantiomers of methyl epijasmonate, synthesis, 6999

bromotyrosine alkloids purealidins B and C from *Psammaplysilla purea*, isolation and structure, 6617
degraded carotenoids, (–)–dihydroedulan II and related compds, synthetic study, 7227
DOPA, oxidative coupling with resorcinol and phloroglucinol, adducts with tetra–hydromethane–benzofuro[,2,3–*d*]azocine skeleton, 6243
evaluation and synthesis of hydroxy– dihydrofuran acetal fragments of aza–dirachtin antifeedant from *Azadirachta indica*, 6813
fungicide clozylacon, precursor of biologically most active isomer, two enantioselective syntheses, 5709
gastroprotective substance AI–77–B from *Bacillus pumilus* AI–77, synthesis, 8635
interjectin, nyasicoside deriv from *Hypoxis interjecta* and *Hypoxis multiceps*, 6717
intermediates, prep of optically active sec alcohols, 8701
NH pyrrolidines, 2,3 or 4–alkyl substit, synthesis via use of β–amino–alcohol–N–oxide derivs, 5161
pepidoglycan monomer derivs, 8407
phthalides, via single or double β–scission of alkoxyl radicals generated from 1–ethylbenzo–cyclobuten–1–ols and from 1,3–dihydro–isobenzofuran–1–ols, 5437
rac 2–hexyl–3–hy–droxy–4–pentanolide (NFX–2), 6623
serotonin, conformationally restricted analogs syntheses, 8653
sesbania alkloids, thesis of acyclic analogues of sesbanimides A and B, 6787
stereospecific transformation of uvidin A into (–)–cinnamosmolide, 6769
three stryllactones from *Goniothalamus giganteus*, 9751
three stryllactones from *Goniothalamus giganteus*, 9751

Bioluminescence
lampteroflavin from *Lampteromyces japonicus*, synthesis, 6215

Biosynthesis
(–)–α– and (–)–β– pinenes and (–)–α– and (–)–β–phellan–drenes biosynthesis, 5933
aldosterone–, 18–sub– stit androst–4–en– 3–one potential inhibitor, 7309
and metabolism of solanaceous alkaloids, 5955
benzoisochromanequinone antibiotics, genetic study of kalafungin, 6059
biomimetic synthesis, dimeric phenathrene derivs, phenol–coupling with phospho–molybdic acid on silica gel, 8601
biomimetic synthesis, quinolizidine alkaloids, 8431
cephalosporin–, branched pathway sesitive to isotope effect, 9881
ecdysteroid–, in *Locusta migratoria*, synthesis of tritiated 3–dehydroecdysteroid precursor, 7067
fatty acid and polyketide–, stereo chemistry and mechanism using chiral malonates, 6015
isoflavone, P–450– dependent oxidative rearrangement, reconstitution of P–450 and NAPH: P–450 reductase, 5969
sanguinarine and indole alkaloids, enzymology and molecular biology, 5945
sarubicin A, synthesis of advanced intermediates, 7209
Streptomyces species sarubicin A bio– synthesis, 7209
sinefungin, study using a cell–free system, 6069

Boron and compounds
borohydride and chloroenamines, prep amino–aza–bicyclo[3.1.0]hexane diastereo–mers, 8133
boron analogs of phos–phonoacetates, synthesis, characterization and antitumor properties of sodium diethylphosphite–carboxyborane and related compds, 6915
dichloroboranes, conversion of 1,2–aminoazides to unsym vicinal diamines by catalytic hydrogenation or reductive alkylation, 8177
N–borane coordin– ation, effect on conformational equilibrium of 6–membered heterocycles, 6903
regio–and stereo– selective hydroboration, route to precursors of ecdysteroids, 7059

Cage molecules
diketones, stereospecific, state sodium borohydride reduction, 6571

Calixarenes
monoalkylated calix[4]arenes via direct alkylation, 8379

Cancer
anti drug photofrin–II, regioselective synthesis related ether–linked porphyrin dimers and trimers, 9571

Carbamates
directed stereoselective hydrogenation and kinetic resolution, N–protected α–(α–aminoalkyl)acrylates, 8869
methylcarbamates via amines and dimethyl carbonate in presence of CO2, 9489

Carbenes
difluoro–, and acetyl– enes with triple bonds, cycloaddition, prep *gem*–difluoro cyclopropenes, 7323

Carbohydrates see also Amino sugars, Cyclodextrins, Thiosugars
α–linked saccharides, stereoselective synthesis via per O–benzylated 2–pyridyl 1–thio hexopyranosides as glycosyl donors and methyl iodide as activator, 6435
β–D–glucuronides, enzymatic synthesis and *in situ* regen–eration of uridine 5'–diphosphoglucuronic acid, 5119
2–deoxy sugars, prep and prop of 2–deoxy glycosyl isothio cyanates, 5797
3–deoxy–D–manno–2–octulosonic , 3 – deoxy–D–arabino–2–heptulosonic and 2–keto–3–deoxy–D—gluconic acids, synthesis from synthetic intermediates, 5625
4,6–O–alkylidene pyranoses, Henry condensations with 1,3–proton transfer catalyst, route to blocked aminomethyl–C–glycosides, 6113
6–O–substit hexoses, reaction with prim amines, 5,6–dihydro–3,5–dihydroxy–4H–pyridones – new Maillard products, 9351
as chiral templates, asymmetric synthesis of α–amino acids, Report, 6079
carbocycles from–, synthesis poly functionalised cyclohexane derivs, prep chiral building blocks, 7663
diacetone glucose architecture, effects of intramolecular oxygens on LAH reduction of propargyl alcohol of 3–*C*–ethynyl–1,2,5,6–di–*O*–isop ropylidene–α–D–allofuranose derivs, 6975
epoxypyranosides, organo–Al induced ring–opening, syn–thesis and structure of γ–hydroxy–isoleucine stereoisomers and corresponding lactones, 6469
epoxypyranosides, organo–Al induced ring–opening, syn–thesis of antimycin A3 and (+)–blastmycinone, 6483

halides, intermediates for prep of 6–alkyl thio–and 6–alkyl sulfonyl–6–deoxy glycosides, 5185
hexoses and aza sugars branched at C(5), asymmetric synthesis, 9641
methyl 3,6–anhydro–D–pyranosides, bis–deoxygenation, 6381
octopyranose derivs, stereoselective synthesis, 8025
oligosaccharides, directed, iterative, stereoselective synthesis via 2–O–substit 2–pyridyl 1–thio glycopyranosides on activation by MeI, 9721
pent–1'–enopyranosylthiazole derivs via thiazole *C* nucleo–sides, 5549
pyranose analogues of thiazole *C*–nucleo– sides, synthesis of tiazofurin, 5539
sugar enlactones, 1,3–dipolar cyclo addition to nitrones, 10087

Carbonates
dimethylcarbonate reaction with amines in presence of CO2, prep methylcarb– amates, 9489

Carbonium ions
1,2,3,4,5,6–*tris*–(bicyclo[2.2.2]oct eno) tropylium ion, form– ation, properties, and reactions, 6951

Carbonyl compounds see also Aldehydes, Ketones, Esters
αβ–unsat–, reaction with N–hydroxyethyl enamines of acetoacetate esters, prep of new heterocyclic system, 6503
α–iodocarbonyls, iodine atom transfer addition to alkynes, precursors for radical translocation, 6189
1,3–dicarbonyl compds, Co–acetate promoted oxidative addition to alkenes under aerobic conditions, 6457
carbonyl additions and displacements role of high press, Report, 8463
chiral–, nucleophilic addition, origin π–facial diastereo selectivity, 8991, 9005

Carboxylic acids
(2*S*,3*S*)–(+)–aziridine–2,3–dicarbo xylic acid, naturally occurring, synthesis, 5287
(*R*)–2–hydroxy–3–, enoic–, hydroxylation of and addition to C=C double bond, 9035
4–thiazolidinylacetic acid, 2–substit, synthesis and stereochemistry, 7029
agglomerin A and (±)–carolinic acid synthesis, prep 3–acyl tetronic acid via O–methyl 3–stannyl tetronates, 8285
chiral malonates, use stereochemistry and mechanism of fatty acid and polyketide biosynthesis, 6015
chorismic acid, enzyme–catalysed conversion to isochorismic acid, 5979
polyfunctional (*R*)–hydroxycarboxylic–, by reducion of 2–oxo acids with *Proteus vulgaris* and hydrogen gas and/ orformate, 9019
uridine 5'–diphospho glucuronic acid, *in situ* regeneration and enzymatic synthesis of β–D–glucuronides, 5119

Carboxylic acid anhydrides
homophthalic–, methoxy–methylidene–substit, alkoxide–induced ring opening, structure and conformation of dihydro isocoumarin, 7869

Carboxylic acid halogen derivtives
(2*R*,3*S*)–3–[(benzyloxycarbonyl)ox y]–2–fluorotetradecanoic acid, synthesis, 7021

Cardiotonic agents
cardiotonic steroids and Erythrophleum alkaloids, structural parallels, 7951,7965

Carotenoids
degraded–, (–)–dihydroedulan II and related compds, synthetic study, 7227

Catalysis and Catalysts see also Phase transfer
1,3–proton transfer–, Henry condensations with 4,6–O–alkylidene pyranoses, route to blocked aminomethyl–C–glycosides, 6113
2–[(2*S*)–2–pyrrolidinyl]pyridine–, enantio– selective addition diethylzinc to aldehydes, 8251
2–[(2*S*)–2–pyrrolidinyl]pyridine–, enantio– selective addition diethylzinc to aldehydes, 8251
catalytic machinery of IPP isomerase due to Cys139, 5919
ceric ammonium nitrate–, selective ring opening epoxides in presence of water, thiols and acetic acid, 9861
lithium perchlorate–, hetero Diels–Alder reaction, Li cation effect, 8399
molybdenum–, elimination from tert alcohols and acetates, prep of olefins, 8155
organotin triflate–, Michael addition enol silyl ethers, 9773
oxidation–, porphyrin with hydrocarbon encapsulated face, synthesis, 8687
phase transfer reactions, activity of cyclophosphazenic polypodands compared with open–chain analogs, 7477
Rh–complexes with dinitrogen ligands derived from 5–pyrido–1,4–benzodiazepin–4–ones, synthesis and properties, 5295

Cavity molecules
organized polyaza–, synthesis and properties, Report, 6851

Cembranoids
7,8–epoxycembranoid, conformational analysis, 9915

Cephalosporins
biosynthesis, branched pathway sesitive to isotope effect, 9881

Cerium and compounds
ceric ammonium nitrate, catalyst selective opening epoxides in presence of water, thiols and acetic acid, 9861

Cesium and compounds
cesium fluoroxy– sulfate, N–fluorin– ation, 7447

Chain reactions
isoprenoid–, elongations by Claisen rearrangements using acetals as precursors of vinyl ethers, 6521

Chalcones
2'–hydroxy–6'–methoxychalcone epoxide and related compds, cyclisation and and subsequent reactions, 4979

Chirality
in α– and β–adreno– ceptor agonists and antagonists, Report, 9953

Chlorins,
benzochlorins, 5,15–diaryl, synthesis and structure, 7853

Chromatography
oxidosqualene–lanosterol cyclase from baker's yeast, partial purification and characterization, 5925
resolution tetrahydro–pyran–2–ones, 9939

Chromones
chromonones, heteroannulation via conjugate addition haloalkanols in presence of base, 9431

Circular dichromism
H–bonding in bilirubin dianion, 6163
long–range exciton coupling, dipyrrinone chromophores, 9759

Cleavage reactions
α–nitroepoxides, nucleophilic ring opening to 1,2–di– ketones, 8883
alkoxide–induced ring opening, methoxy– methylidene–substit homophthalic anhy– dride, structure and conformation of dihydroisocoumarin, 7869

organo–Al induced ring–opening of epoxypyranosides, synthesis and structure of γ–hydroxyisoleucine stereoisomers and corresponding lactones, 6469
organo–Al induced ring–opening of epoxypyranosides, synthesis of antimycin A3 and (+)–blastmycinone, 6483
oxidative–, tricyclic pyridone to bicyclic lactamdione, 9981

Cobalt and compounds
acetate promoted oxidative addition, 1,3–dicarbonyl compds to alkenes under aerobic conditions, 6457

Computations see Theoretical calculations

Complexation
cation–, and transport of C3 symmetric tripodands, perhydrotriquinacenic hosts, 5867

Complexes
π–allyltricarbonyliron lactone–, synthesis β–lactone esterase inhibitor (–)–valilactone, 9929
Co–, dioxygen affinities, binucleating polyaza macrocyclic and macrobicyclic ligands, 6895
crown ether–cation–, theoretical study chemical interactions, 9317
Rh catalytic–, with dinitrogen ligands derived from 5–pyrido–1,4–benzodiazepin–4–ones, synthesis and properties, 5295
ruthenium–, bridged azatriaryls, 6851
srenetricarbonylchromium–, lithiation/– iodination, synthesis of phytoallexins, 7981,7991
[(η5–C5H5)Fe(CO)–(PPh3)COCH3] derived enolates and 2,3–O–isopropylidene–D–glyceraldehyde, aldol reaction, 10077

Configuration
abs and relative–, athanasin difuran sesquiterpene, 9179
abs–, E and Z pinnatifidienyne, 9411
cis– and trans–3,4–dimethyl–6–t–butyl–5,6–dihydro–2H–thiopyran–S–oxides and S–methyl cations, 7677
requirements, directly acting α– and β–adrenoceptor agonists, Report, 9953

Conformation
1–(1–deoxy–β–D–psicofuranosyl)thymine, 5847
A analysis furo– [2,3–c]pyran–β–D–nucleosides, 9675
analysis of 7,8–epoxy–cembranoid, 9915
analysis, 2–alkyl–1,4– dithianes and related comps by NMR and MMX, 9455
and stereodynamics, furan–3–aldehyde and corresponding furoyl σ–radical, 6427
and stereoslectronics, 9,10–annelated–1,4,5,8–tetraoxa decalins, multidisciplinary probe, 5781
bilirubin dianion, intramolecular H–bonding, 6163
branched tetra–, nona– and deca–ribonucleotides, 6305
bridged 2,2'–bipyridines and 2,2':6,2''–terpyridines, Report, 6851
cis and *trans*–2,3–diphenyl–1–oxabicyclo[3.1.0]hexanes, 9629
cis– and trans–3,4–dimethyl–6–t–butyl–5,6–dihydro–2H–thiopyran–S–oxides and S–methyl cations, 7677
dihydroisocoumarin structure, 7869
equilibrium of 6–membered heterocycles, effect of N–borane coordination, 6903
features of cyclodo– decanone, NMR study, 8579
hindered β–diketones with bulky substit at intercarbonyl position, dipole moment and theo– retical calculations 6511
naphtho[1,8–*b*,*c*]–1,5–dithiocin–1–1–di–, oxide, –1,5–dioxide, –1,1,5–trioxide and –1,1,5,5–tetraoxide, 5077
naphtho[1,8–*b*,*c*]–1,5–dithiocin and its S–oxides, in soln, 5087
ophiobolin K and 6–epiophiobolin K, nematocidal agent from *Aspergillus ustus*, 6931
preferences of isomeric naphth–aldehydes by NOE experiments, 9125
quinolizidine–, syn– thesis of 7,8–dehydroberbines, 5841
requirements, directly acting α– and β–adrenoceptor agonists, Report, 9953
restricted analogs of serotonin, syntheses, 8653
tetrameric branched RNA–DNA conjugate and branched–RNA analog, comparison by 500 MHz NMR, 7135

Copper and compounds
β–diketonates, reaction under free radical conditions to highly congested β–diketones, 8031
catalyzed coupling, alkyl tosylates and Grignard reagents, prep of 1,ω–difunctional hydrocarbon chains, 'two–fold reaction', 6287
organo reagents diastereoselective addition to 2–*exo*– bornyl crotonates, 9691
promoted allylic amination, 9449

Coumarins
dihydroisocoumarin, structure and conformation, 7869
microminutin syntheses via key intermediate isomurralonginol, 9737

Coupling reactions
carbonylative–, Pd–catalysed, 2–hydroxyaryl iodides with ethynlarenes, regiochemistry, 6449
chiral hydroxy–(*E*,*E*)– iododiene and rac acetylenic alcohol in prep LTB4, 7279
cross–, pinacol, vanadium promoted, enantio– and dia–stereoselective synthesis of 1,2–diols, 5737
Cu–catalyzed–, alkyl tosylates and Grignard reagents, prep of 1,ω–difunctional hydrocarbon chains, 'two–fold reaction', 6287
long–range exciton–, dipyrrinone chromaphores, 9759
oxidative–, DOPA with resorcinol and phloroglucinol, adducts with tetrahydromethanebenzofuro[,2,3–*d*]azocine skeleton, 6243
oxidative–, phylllanthin and halo derivs with TTFA, DDQ, Li/THF, synthesis dibenzocyclooctadiene system and phyl– tetralin, 8277
oxidative–, phyl– llanthin and halo derivs with TTFA, DDQ, Li/THF, synthesis dibenzo–cyclooctadiene system and phyltetralin, 8277
phenylsulphenyl–, phenylsulphinyl– and phenylsulphonylpentadienyl metals, regio– and stereo–chemistry, 7489
synthesis chiral NADH model with 1,6–naphthyridinone structure, 9363
TiC14 vs SnC14– mediated–, N–6– benzoyladenine and perbenzoylated 2–deoxypyranose, application synthesis homochiral acyclo and carboacyclo– nucleosides, 9993

Crown ethers
crown ether–cation complexes, theoretical study chemical interactions, 9317

Cryptands
β–hydroxy–, from αβ–epoxyketones by photoinduced single electron transfer, 7775

Cyanides
methanesulfonyl cyanide or *p*–toluenesulfonyl chloride, O–sulfinyl– ation of alcohols, 9167

Cyano compounds
β–cyanocyclobutenone, reactive dienophile compared with β–cyanocyclopentenone, 8167
4–cyano–2,3–diphenyl2H–pyrrol–5–thione, synthesis and reactions, 8243
cyanoketenes with ether, thioether or amino substituents, synthesis, 8161

Cyclic ketones
β–cyanocyclobutenone, reactive dienophile compared with β–cyanocyclopentenone, 8167
2–cyclohexen–1–one annulation, stereo–controlled synthesis of hydroxylated tricyclic systems, 5491
2–methyl–2–(3–carboxypropyl)cyc lopent–4–en–1,3–dione, bi–functional linker molecule, synthesis, 5231
4– and 6–membered–, intramolecular acylation *m*–trimethylsilyl–*m*–alkenoyl chlorides, vinylsilane terminated, 8111
benzoin, synthesis and reactions, 4–cyano– 2,3–diphenyl–2H–pyrrol–5–thione, 8243
bicyclic intermediates, synthetic approach to pentacyclic triter–penes of arborane family, 7045
bicyclobenzodiazepin–ones via 3–oxo–1,2–diazetidinium hy–droxide inner salts, 9599
cycloalkanones, spirolactonization, 7037
cyclododecanone, conformational features, NMR study, 8579
cyclopentanone–aryloximes rearrangement, synthesi s (±)–aplysin, (±)–fili– formin and their debromo analogues, 10003
exomethylene cycloalkanones, α–alkylated cyclodecanones and indanones, prep via carbocyclic ring expansion by radical chain processes, 6795
heptacyclic triones, route to [7]–prismanehomo–and secologues, 7821
with CO function at side chain, ethylene glycol/BF3 ring transformations, 8523

Cyclisation reactions
1–hexenyl radicals, effect of carbonyl group, 9463
5–hexenyllithium–, synthesis of (±)–cuparene, 7727
electrophilic–, methyl 6–(2–indolyl)–2–azabicyclooct–7–ene–6–carboxyla tes to iboga alkaloid analogs, improved reaction, 5673
free radical–, 1,6–dienes with allylsulfones, 5425
functionalised allylsilanes, 7689
intramolecular SH2' macrocyclisations, 5901
Mn–based free radical–, formation, 7– and 8–membered rings, 8663
Pd catalysed regiospecific–, syn–thesis bridged–ring carbo– and heterocycles, 9703
photo–, N–aroylenamines derivs, trapped iminium ion leading to functionalised hetero spiranic compds, 7301
photo–, N–benzoylenamines, synthesis spirocyclohexanes and isoquinoleine, 7287
pyrazolo[4,3–*c*)– and pyrazolo[3,4–*c*]pyridine derivs via pyrido annelation by tandem Wittig/elctrocyclic ring–closure, 6737
reductive–, using Bu3SnH, oxidation during process, 10119
tandem aza–Wittig reaction/electrocyclic ring closure, synthesis of quinazoline ring, 5819
thioamide indole–, N–(7–alkyl–4–indolyl)–N–meth yl–L–valine esters, method for teleocidin intermediates, 8535

Cycloaddition reactions see also Addition
1,3–dipolar–, nitrone route to (+)–mono– morine I, 9329
1,3–dipolar–, nitrones to sugar enlactones, 10087
1,3–dipolar–, reaction of diazomethane with endo–*cis*–5,6–disubstit bicyclo[2.2.2]oct–2–enes, 7699
4+2–, singlet oxygen, boron–mediated fragmentation and intramolecular 2+2–photocycloaddition, synthesis of sec–[16]–prismanes, 7783
arylsulfonyl substit alkynes with diazopropane, route to prep of arylsulfonyl substit cyclo–propenes, 6139
benzyne to 3–oxo–1,2–diazetidinium hydroxide inner salts, formation of "bi–cyclobenzodiazepinones", 9599
cycloadducts of ethene with 2(1H)pyrazinones, functional–isation and reduction to 2,5–diazabi–cyclo[2.2.2]octan–3–ones, 9269
Diels–Alder reactions, β–cyanocyclobutenone, compared with β–cyanocyclopentenone, 8167
Diels–Alder–, 5–ylidene–2(5H)–furanones as dienophiles, effect of substituents on site selectivity, 8775
intramolecular 1,3–dipolar–, nitrile oxide, stereoselective synthesis of (+)–test– osterone, 6635
intramolecular 1,3–dipolar–, nitrone, oxime and nitrile oxide, synthesis amino inositol derivs as α–glucosidase inhibitors, 7537
intramolecular reactions of substit pyridines, synthesis of azatricycles, 8499
intramolecular–, carbonyl ylide to an acetylene, synthesis 2H,4H and 9bH– furo[3,2–c]benzo–pyrans, 7713
nitrones to diphenyl–phosphinoethenes, synthesis of isox– azolidinylphosphines, 9053
nitroso–halogenobenzenes to cyclopentadiene, rearrangement to epoxy–epimino– and γδ–epiminopentadienal derivs via N–O and C–C bond breaking, 8323
olefins with keteneiminium cations, access to (±)–grandi–sol, fragranol and related cyclobutane bye–products, 5133
photo–, to unsaturated lactams, route to (–)–grandisol, Report, 9503
protroanemonin with heterosubstituted dienes, synthesis of polyfunctional oxaspiro[4.5]decanes, 5895
tandem Michael addition–1,3–dipolar cycloaddition, oxime conversion to nitrones using bifunctional Michael acceptor–dipolarophile components, 8297
[1+2]–, difluorocarbene and acetylenes with triple bonds, prep *gem*–difluorocyclopropenes, 7323

Cyclobutanes
2–aryl–1–vinylcyclobutanol, thermal reactions, 7551

Cyclohexanes
chiral 4,4– and 5,5–dialkylcyclohexenones, Report, 9503
cyclohexenol, chiral densely function– alised, 7259
polyfunctionalised derivs, carbocycles from carbohydrates, prep chiral building blocks, 7663

Cyclopentanes
(*E*)–arylidene and allylidene–, via Pd–catalysed reaction of γ–acetylenic malonate anions with unsat halide, 6293
chiral 4,4– and 5,5–di–alkylcyclopentenones, Report, 9503
cyclopentanols via intramolecular reactions of allyloxy radicals, 8417

Cyclophanes
rigid *syn*–ortho–, cavity–shaped molecules, synthesis, Report, 6851

Cyclopropanes
asymmetric synthesis via bicyclic lactams. Report, 9503

Cyclopropenes
arylsulfonyl substit–, prep and reactivity, 6139
gem–difluoro–, via cycloaddition difluorocarbene and acetylenes with triple bonds, 7323

Dealkylation
N–dealkylation–N–nitrosation, tert–aromatic amines by n–butylnitrite, 7845

Dehalogenation
dehydro–, activity of PEG–quat phase transfer catalysts, 2895
deiodination of iodoalkylidene lactones, prep of α–alkylidene lactones, 5203

Dehydration
alcohols with triphenylphosphine–CCl4, D–isotope studies, 949

Deoxygenation
bis–, methyl 3,6–anhydro–D–pyranosides, 6381

Deprotonation
C,C–bis–, O,C–bis–, N,C–bis– and S,C–bis–, dianions, Report, 4223

Diastereoselection
π–facial–, origin, nucleophilic addition to chiral carbonyl compds, 8991, 9005
addition organocopper reagents to 2–*exo*– bornyl crotonates, 9691
aldol condensation, directly generated titanium enolates of activated esters with aldehydes, 7897
alkylation and protonation of chiral Schiff bases, 4611
and enantioselective synthesis of 1,2–diols by vanadium promoted pinacol cross coupling, 5737
C–C bond formation, reaction of glyoxal chiral heterocycle with organometallic reagent, asymmetric synthesis of N–methyl–α–amino ester, 4343
carbamate–directed hydrogenation and kinetic resolution, N–protected α–(α–aminoalkyl)acrylates, 8869
diastereofacial selectivity, cyclo–additions, reaction of diazomethane with endo–*cis*–5,6–disubstit bicyclo[2.2.2]– oct–2–enes, 7699
double–, in SPAC reaction, stereochemically matched sulfinylacetates, 6601
heteroconjugate addition of acetylenic derivs, 3727
intramolecular nitrone, oxime and nitrile oxide cycloaddition, synthesis amino inositol derivs as α–glucosidase inhibitors, 7537
observed for Reformatsky reaction of 3–(2–bromo–propionyl)–2–oxazolidone derivs with 4–acetoxy–2–azetidinone, 2801
propargylic epoxides, syn or anti opening, synthesis of α–allenic alcohols, 1677
reaction silyl enol ethers with chloro– sulfides, 8753
synthesis of bis–β–lactams, 5379
[2,3]–sigmatropic rearrangement, substit propargyl arenesulfenates, 3353
[2,3]–sigmatropic rearrangement of substit allylic N,N–dialkylamidosulfoxylates, mol structure of [(1')*S**, (S)*S**]–2'*E*)–4–[[3'–(4"–bromophenyl)–1'–methyl–2'–propenyl]sulfiyl]–morpholine6 655

Diazetidinium salts
3–oxo–1,2–diazetidinium hydroxide inner salts, formation of "bicyclobenzodiazepinones", 9599

Diaziridines,
diazirines, substit, synthesis bifunctional reagent for photo–affinity labelling, 5603

Diazo compounds
α–diazoketones, Rh2(OAc)4 mediated C–H insertion, regiocontrol C=C bond, 7403
diazoalkanes, 1,3–dipolar cyclo–addition to nitrogen containing heteroaromatic systems, 2925
diazomethane reaction with endo–*cis*–5,6–disubstit bicyclo[2.2.2]oct–2–enes, 7699
diazosulfides, arylation of potassium 2,4–pentanedionate via SRN1 process, 333
ethyl3,3,3–trifluoro–2–diazo–propionate, Rh–catalysed reaction with allylic sulfides, prep of CF3–containing γδ–unsat carboxylic esters, 1629
reaction with tetra– nitromethane, oxygen transfer by dis–sociative electron transfer, 3773

Dienes
1,3–, photooxidation, synthetic and mechanistic aspects, Report, 1343
1,3–cyclohexadiene, photosensitized dimerisation, 3137
1,3–diaza–1,3–butadienes, [4+2] cyclo– addition with ketenes, 1473
1,4–dialkyl–1,4–dimethoxycyclohexa–2,5–dienes, two–step prep, 7471
1,5–dien–3–ynes, synthesis, ident–ification of trienic sex pheromones, 7767
1,6–dienes, free radical cyclisation with allylsulfones, 5425
1–benzoyloxy–2–t–butyl–dimethyl siloxy–4–methoxy–1,3–butadiene, cycloaddition to N,O–protected D–threoninals and D–*allo*–threoninals, 1045
1–methoxy–1,3–butadiene, high pressure [4+2] cycloaddition to N,O–protected D–threoninals and D–*allo*–threoninals, 1037
1–oxa–2,3–cyclohexadiene, formation of [4+2] and [2+2] adducts with dienes or olefins with regio and stereoselectivity, 4603
3,6–dimethoxy–3,6–dimethylcyclohexa–1,4–diene, regioselective α–arylation of ketones via silyl enol ethers, 9119
5–ylidene–2(5H)–furanones as dienophiles, effect of substituents on site selectivity in Diels–Alder cycloadditions, 8775
activated–, cycloaddition to α–amino aldehydes, effect of N–protecting groups on stereochemistry, 1053
bicyclic–, via intramolecular Pd–catalysed coupling of enol triflate and vinylstannane functions, 4555
chiral heterodienes, chiral spirocyclic (Z)–5–arylmethylene–1,3–oxazine–4,6–diones, 7271
conjugated–, addition to t–butylcyanoketene, 3845
diastereoselective–, as enantiomerically pure vinylketene acetals in *Diels–Alder* reaction, catalysis and facial selectivity, 4519
diene–diolates of unsat carboxylic acids, iodine oxidatuve coupling, 1997
E,E– and *E,Z*–dienes, conjugated, stereoselective synthesis via alkenylborane derivs, 343
electron–rich–, Diels– Alder reaction with protroanemonin, synthesis of spirolactones, 5895

nonconjugated–, addition to carbenium ions, retarding (–I)effect of second double bond, 219
norbornadiene face–to–face heptacyclic dimer, 1,4–bishomo–[6]–prismane, 7807
or dienophile behaviour of N–acyl–*o*–quinone monoimide, Diels– Alder reactions, solvent effect result of frontier molecular orbital interaction, 5857

Dimerisation
oxidative–, mesoinonic oxazolones, 5681
photosensitized–, 1,3–cyclohexadiene, 3137

Diols and Triols
1,2– and 1,3–diols, in methylpropionate, PPl–catalyzed resolution, tandem use of enzymes, 7409
1,2–diols, enantio– and diastereoselective synthesis by vanadium promoted pinacol cross coupling, 5737
butenediols and phthalic alcohol, selectivity in electrooxidation using polypyridine Ru complex, 851
enediols, reaction with allylsilanes. synthesis 7,8 and 9–membered ring compds, 139
ethylene glycol/BF3, use in ring trans– formations, 8523
meso–cyclopentane–, lipase–catalysed transesterification, 7569
unsymmetrical 1,2–, regioselective and stereospecific substitution using 1,3,2 λ5–dioxa–phospholane, 1603
Z–2–buten–1,4–, Pd catalysed reaction with vinyl triflates, prep of β–vinyl–γ–butyrolactones, 1525

Dioxanes
epimeric 1,3–, 2,6–dimethyl–4–N'–thioureido–substit, prep and crystal structure of *rel*–2*S*–4*S*,6*S*–2,6–dimethyl–4–(N'–benzyl–thioureido)–1,3–dioxane, 4665

Dioxalanones
synthetic intermediates, synthesis of 3–deoxy–D–manno–2–octulosonic, 3–deoxy–D–arabino–2–heptulosonic, and 2–keto–3–deoxy–D–gluconic acids, 5625

Dioxaphospholanes
1,3,2 λ5–dioxaphospholane, stereospecific and regioselective substitution of unsymmetrical 1,2–diols, 1603

Dioxins
1,3–dioxin–4–ones having hydroxyalkyl group at 6–position: two lactone formation from difference in ring opening and closure, 5689
1,3–dioxin–4–ones with chiral oxoalkyl groups at 6–position, baker's yeast reduction to alcohols, EPC synthesis, 6197

Dioxiranes
enantioselective oxidation, sulfides to sulfoxides, presence of bovine serum albumin, 8385

Dioxolanes
(4*R*,5*R*)–4,5–diphenyl–2–((*E*)–2–butadiene)–1,3–dioxolane, reaction with N–methylmaleimide, *Re exo* approach to diene, 4519

Displacement reactions
aromatic version of radical nucleophile displacement reactions, reconsideration of mechanism, 6577

Disulfides
alkoxy and acetoxy–, by regioselective conversion of thriiranes with Ce based oxidants, 149
synthesis via sulfenylation of alkyl and aryldithiopyridine N–oxides, 6127

Dithianes
2–alkyl–1,4–dithianes and related comps, conformational analysis by NMR and MMX, 9455
alkoxy and acetoxy–, by regioselective conversion of thriiranes with Ce based oxidants, 149

Donors
3–hydroxy–6–methyl–2–pyridyl donor groups in new multidentate ligands, synthesis, 357

Drugs
1,4–dihydro–4–oxoquinoline–3–carboxylic acids via electro–oxidative formation of enamine moiety, 665
2–methyl–2–(3–carboxypropyl)cyclopent–4–en–1,3–dione, bifunctional linker molecule, synthesis, 5231
aldosterone biosynthesis, 18–substit androst–4–en–3–one potential inhibitor, 7309
anticancer–, photofrin–II, regioselective synthesis related ether–linked porphyrin dimers and trimers, 9571
catecholamines, mechanism of acid–catalysed–racemisation, 5019
design, generation of structures based on known receptor structure, 8985
HIV inhibition, diterpenes from *Homalanthus acuminatus* and *Chrysobalanus icaco* 4547
mechlorethamine, cisplatin and mitomycin C, miminal structural reorganisation of DNA in cross linking, 2475
mefloquine, high yielding synthesis, 7609
weinbersterol disulfates A and B from *Petrosia weinbergi*, 1185

Dyes
dithiolene–, with strong near–IR absorption, synthesis, Report, 909

Eicosanoid s see also Leukotrienes, Prostaglandins
fatty acid and polyketide biosynthesis stereochemistry and mechanism using chiral malonates, 6015

Electrochemical reactions
anodic amide oxidations, annulation, 6– and 7–membered rings onto amines, 583
anodic coupling, pyridopyrimidine derivs, C–O bond formation, 675
anodic generation, polybromochloride ions, use as con– trolled oxidising agents for ex–cell indirect electro–oxidation of alcohols, 887
anodic methoxylation and acetoxylation, arylfluoroalkylsulfides, 625
anodic oxidation, δ–alkenylamines, stereoselective synthesis of 4– or 5–substit 2–benzyl– and 2–benzoyl–pyrrolidines, 747
anodic oxidation, 1',8'–disubstituted *a,c*–biladiene salts, 685
anodic oxidation, 2–picoline, 697
anodic oxidation, 4–phenylphenols, intramolecular cyclcisation of 2'–olefinic side–chain, effect of olefin substituents on C–C bond formation, 655
anodic oxidation, C–C bond formation using Mn–acetate, 831
anodic oxidation, cycloheptatriene systems, synthesis of non–benzenoid aromatic compds, 593
anodic oxidation, diarylacetylenes and diaryldiacetylenes, synthesis diaroyl– stilbenes and acetylenic α– and γ–diketones, 799
anodic oxidation, isoalkyl ethers in aqueous electrolytes, 725
anodic oxidation, N–acyl and N–alkoxycarbonyl dipeptide esters, key step for chiral heterocyclic building blocks, 563

anodic oxidation, *p*–methylbenzylsulfonate, ester and nitrile, regioselective functionalisation of benzylic positions, 3969
anodic oxidation, phenols, natural products synthesis, 635
anodic reactions of anilines and indoles, 737
anodic trimerisation, aromatic ortho– diethers, 791
anodically produced phenoxenium ions, synthesis of dipeptides and glycoamino acids, 645
catalytic diol oxidation, selectivity using polypyridine Ru complex, 851
cyclisation, unsaturated hydroxy compds, phenyl–seleno–etherification and –lactonisation, 859
duel synthesis of *p*–benzoquinone from benzene, 841
electro–generated aminium radicals, cyclisation to 11–substituted dibenzo[a,d]cycloheptenimine derivs, 757
electrolytically generated superoxide, substit of 5–halo–1,2,3–triazines, 4317
fluorination, alkenes, phenanthroline, naphthalene and chlorobenzene in amine–HF, 705
generation of acyloxytripheny–phosphonium ions, *in situ* prep of esters, amides and β–lactams, 767
indirect oxidation, L–cysteic acid and and L–cysteine from L–cystine, 877
Mn mediated synthesis of sorbic acid precursors,809
oxidation of organo–Si compds, one carbon homolgation reagents, 615
oxidation, α–sulfonyl carbanions, formation dimeric olefin and disulfone, mechanism, 777
oxidation, ketones in MeOH in presence of alkalimetal bromides, 895
oxidation, phenyl substit alkanes and alcohols,role of polymeric mediator structure, 5025
oxidation, prep of 4–acetoxy–3–[1–(t–butyl–dimet hylsiloxy)ethyl]–2–azetidinones, 531
oxidative cleavage as neutral deprotection forcarboxylic acids, 867
oxidative formation of enamine moiety for prep of 1,4–dihydro–4–oxo–quinoline–3–carboxylic acids, 665
selective anodic oxidation of camphor, 5463
synthesis of *cis*–3,4–bis(2,2,2–trifluoroethyl)–pyr rolidine, 549
trifluoromethylation of olefins, mechanism and product selectivity, 555

Electrodes
ion–selective–, synthesis of bis–(benzocrown ether)s with polymethylene bridges, 4101
nickel hydroxide–, oxidation of partially protected carbo–hydrates, 715

Electron spin resonance
anodic reactions of anilines and indoles, 737
t–butylmagnesium chloride, reaction with 1,4–dinitro–benzene, 1091

Electron transfer
dissociative–, oxygen transfer by reaction of tetranitromethane with diazo compds and sulfides 3773
photoinduced–, formation of β–hydroxyketones from αβ–epoxyketones, 7775
photosensitiser, with or without, photolysis cyclic enol esters, 9289
reactions of–, bridge– head halides, strain energy effect, 941

Electronic spectra
benzochlorins, 5,15–diaryl, 7853

Elimination reactions
β–elimination reactions, phase–transfer catalysed, cocatalysis, in 2843
benzothiazines via potassium dimsylate to 2–alkenyl anilines, 8855
catalysed–, from tert alcohols and acetates by transition metals, prep of olefins, 8155
D–isotope studies, dehydration of alcohols with tri–phenylphosphine–CCl4, 949
triphenyl phosphine oxide or dichloro–triphenyl–phosphorane, reaction of iminophpsphoranes with symmetrical dicarbonyl dichlorides, 53

Enamines
and β–aminosulfonyl–, synthesis via rearrangement of N–arylsulfonyl amidines, 1937
chloroenamines and borohydride, prep aminoaza–bicyclo[3.1.0]hexane dia–stereomers, 8133
N–aroylenamines derivs, photo–cylisation, trapped iminium ion leading to functionalised hetero spiranic compds, 7301
N–benzoylenamines, photocyclisation, synthesis spirocyclohexanes and isoquinoleine, 7287
syn–selective Michael reaction with 2–(1–alkenyl)–1,3–dioxol–an–2–ylium cations *in situ* generated from 2,2–dimethoxyethyl 2–alkenoates, 3737

Enantiomeric purity
2,3–diamino acids, synthesis via chiral imidazolidin–2–ones, 2263
enantiomeric 4–acyl butanolides, baker's yeast reduction, 9247
optically active 1–aminoalkylphosphonic acids via penicillin acylase hydrolysis of racemic N–acylated 1–amino– alkylphosphonic acids, 3989
optically active compds, large scale perspective, Report, 4789
pure compds via baker's yeast reduction of 1,3–dioxin–4–ones with chiral oxoalkyl groups at 6–position to alcohols, 6197
synthesis of both enantiomers of methyl epijasmonate, 6999
vinylketene acetals functioning as diastereoselective dienes in Diels–Alder reaction, catalysis and facial selectivity, 4519

Enantioselectivity see also Asymmetric induction
α–arylamino acid synthesis via reaction of tricarbonyl–Cr–complexess with anions from Schiff bases of α–amino esters, 4619
and diastereoselective synthesis of 1,2–diols by vanadium promoted pinacol cross coupling, 5737
asymmetric Sharpless epoxidation of divinylcarbinol, *erythro*–D– and L–4–pentenitols by hydrolysis of epoxy–4–pentenols, 2195
enzyme–, effect of substrate structural changes, 7569
hydrogenation, conjugated enones, catalysed by iridium complexes, effect of charge distribution, 1965
oxidation, sulfides to sulfoxides, presence of bovine serum albumin, 8385
reduction of acetophenone and anti–acetophenone oxime methyl ether with borane, use of 1,2– and 1,3–amino alcohols, 4941
synthesis kainoid analogs via Co–mediated cyclisations, 155
synthesis of (+)–kjell– manianone, 173
synthesis of (–)–epi–podophyllotoxin and (–)–podophyllotoxin 4675

synthesis of 4 stereoisomers of 3–hydroxy–5–decanolide, and both enantiomers of massoialactone, 3335
two syntheses of precursor of biologically most active isomer of clozylacon, 5709
zinc chloride induced–, aluminium enolates, synthesis estradiol–3–methyl–17–t–butyl diether, 7583

Enantiospecificity
monocyclic β–lactams, synthesis from ester enolates and silyl–imines, 9061
routes to 3,4–disubstituted azetidinones, 1137

Ene reactions
asymmetric synthesis of prim amines from alkenes and chiral chloronitroso sugar derivs, 3313
PM3 study, reactions of propene with singlet oxygen and enophiles, 1707

Energy
free energy calculations in Monte Carlo simulations to quantify association of guanine–cytosine and adenine–uracil base pairs in chloro– form, 2491

Enolates
derived from [(η5–C5H5)Fe(CO)(PPh3)COCH3] and 2,3–O–isopropylidene–D–glycer aldehyde, aldol reaction, 10077
ester–, and silylimines, synthesis of monocyclic β–lactams, 9061

Enones see also Chalcones
αβ–unsaturated–, intermediate π–complexes, addition of trialkyl– silyl and trialkyl–stannyl cuprates, 1177
conjugated–, selective hydrogenation catalysed by iridium complexes, effect of charge distribution, 1965
moiety, sodium bis–(2–methoxyethoxy)(1,1,1,3,3,3–hexafluoro–2–propoxy)aluminu m hydride, stereoselective reducing agent, 2773

Enynes
conjugated–, stannyl–metallation, 1163
E–enynes, conjugated, stereoselective synthesis via alkenylborane derivs, 343
Pd–catalysed coupling of vinyl triflates application to synthesis of 1α,25–dihydroxyvita min D3, 3485

Enzymes
α–glucosidase inhibitors, synthesis, 7537
β–lactone esterase inhibitor (–)–valilactone, synthesis via π–allyltricarbonyliron lactone complexes, 9929
and spectroscopic characterisation, 2'–5' and 3'–5' RNA hexamers *AACCUU*, 1075
approach to (*R*)–tetrahydro–5–oxo–2–(2–hydroxy ethyl)furan, synthesis of (*S*)–4–hexanolide, pheromone antipode of *Trogoderma glabrum* 3089
catalysed synthesis of phospha–C–peptides from alkylphosphonic and dialkylphosphinic acid esters and L–α–aminocarboxylic acids, 1239
catalysed transesterification in alkyl carboxylates as solvents, resolution sec alcohols, 7645
catalyzed ester hydrolysis, 4–acet–oxy–3–methyl–2–cyclohexenone , synthesis of optically active cyclohexenol derivs, 5883
chemistry of functional group arrays, electrostatic catalysis and the "intramolecular salt effect" 2617
chemo–, synthesis, use of 1,2– and 1,3– amino–alcohols in enantioselective reduction of acetophenone and anti–acetophenone oxime methyl ether with borane 4941
chorismate mutase/prephenate dehy– dratase from *Escherichia coli*, subcloning, over–production and purification 2573
cleavage, 2'–5' and 3'–5' RNA hexamers *AACCUU*, charact–erisation in soln using 2'–t–butyldimethylsilyl protection, 1075
conversion, deuterated analogs δ–L–α–aminoadipoyl–L–cystei nyl–D–allylglycine, substrate for isopenicillin synthase, 8223
dehydroquinate synthase, inhibition by carbaphosphonate predicted, 2423
diamine oxidases, oxidation of putrscine and cadaverine derivs, 507
dihydrofolate reductase *E.coli* system, drug design based on known receptor structure, 8985
exoglucosidases, inhibition by and synthesis of 1–epoxyalkyl–1–deoxynojirimycin s, 2433
glutathione peroxidase–like activity, effect of NO2 *ortho* to Se in 7–nitro–1,2–benziso–selenazolin–ones, 9053
glycinamide ribonucleotide trans–formylase, multisubstrate adduct inhibitors synthesised and enzyme assembled, 2351
glycosidases, effect and synthesis, (1*S*,2*R*, 6*R*,7*S*)–1,2,6,7–tetrahydroxy pyrollizidine, 131
hydrolysis and chemical trans–formation, prep optically active sec alcohols, 8701
hydrolysis, cyclo– propanes, synthesis optically pure dicty–opterenes A anbd C, 1215
inhibitors, hydroxyethylene dipeptide isosteres as building blocks, 1887
inositol monophosphatase, D– and L–*myo*–inositol 1–phosphorothioate as substrate, 3895
isochorismate synthase reaction, origin of C–2 OH, 5979
isopenicillin N synthase, prep of new penicillins, 5309
isopenicillin N synthase isozymes in E.*coli*, high–level soluble expression, 5991
isopenicillin synthase action mechanism via synthesis δ–L–α–aminoadpoyl–L–cysteinyl–D–all ylglycine and 8 deuterated analogs, 8203
isopentenyl diphosphate isomerase, site–directed mutagenesis of Cys 139 using 'counter' PCR amplification of an expression plasmid, 5919
key–, and molecular biology of sanguin– arine and indole alkaloid biosynthesis, 5945
lipase catalysed aminolysis and transamidation reactions, 9207
lipase–catalysed transesterification, meso–cyclopentanediols, 7569
lipase–catalyzed kinetic resolution of methyl 4–hydroxy–5–tetradecynoate, synthesis of Japanese beetle pheromone, 6223
lipases, *Candida cylibindracea and Pseudomonas fluorescens* regioselective butrylation of sec OH groups, D– and L–galacto and mannopyranosides, 103
monoterpene cyclases, multiple product formation, evaluation by isotopically sensitive branching, 5933
Na+K+–ATPase activity, Eryhthro– phleum alkloid analogs, 7965
oxidosqualene–lanosterol cyclase from baker's yeast, partial purification and characterization, 5925
P–450 and NAPH:– P–450 reductase, reconstitution, P–450–dependent oxidative rearrangement of isoflavone, 5969

penicillin acylase hydrolysis, racemic N–acylated 1–amino–alkylphosphonic acids, prep of optically active 1–aminoalkylphosphonic acids, 3989
pepsin catalysis, long range electrostatic effects, 2519
peroxidase–mediated oxidation, phenols, anilines, sulfides and thiobenzamides, M.O.techniques, 7525
porcine pancreatic lipase, resolution of branched and unbranched 2–alkanols, 1611
prochiral compds, asymmetric synthesis of optically active compds, Report, 4749
prolyl 4–hydroxylase acivity, effect of Boc–L–prolyl–L–propargylglycy l–glycine methylester, 3947
protein phosphatases, inhibition by calyculins E,F,G, and H, 2999
renin inhibitors possessing hydroxy– ethylene isostere residue, synthesis from 3,4,6–*tri*–O– acetyl–D–glucal via lactone precursor, 2785
resolution of norbor(ne)nyl–methanols in organic media, application to synthesis of (+)– and (–)–*endo*–norbornene lactone, 5513
ribonuclease cyclo–dextrin–bisimidazole enzyme mimic, synthesis, 2365
serine hydroxymethyl– transferase, (2*R*)– and 2(*S*)–[1^{13}C]2–amino–2–methyl malonic acid as chiral sub–strates, 497
serine proteases and other enzymes, histidine–aspartate couple, syn and anti–oriented imidazole carboxylate models, 2649
syntheses, rac and chiral isomers of 7–methyl–1,6–dioxaspiro[4,5]de cane, 1157
synthesis of β–D–glucuronides and *in situ* regeneration of uridine 5'–diphos–phoglucuronic acid, 5119
tandem use, PPl– catalyzed resolution of 1,2– and 1,3–diols in methyl propionate, 7409
thermostable–, synthesis of (*S*)–(+)– ferrulactone using TBADH–generated bifunctional chiron, 4631
uroporphyrinogen III synthase, mechanism of action, molecular biology and biochemistry, 6003

Epoxidation

(*R*)–2–hydroxy–3–enoic acids, 9035
and carbenation, 1–indanones and 1–tetralones, 1665
asymmetric Sharpless–, divinyl–carbinol, *erythro*–D– and L–4–pentenitols by hydrolysis of epoxy–4–pentenols, 2195
methyl farnesoate, use of dimethyldioxirane, prep of related insect hormones, 1291

Epoxides

α–nitroepoxides, nucleophilic ring opening to 1,2–diketones, 8883
2'–hydroxy–6'–methoxychalcone–, and related compds, cyclisation and and subsequent reactions, 4979
2'–hydroxychalcone–, synthesis, 4959
7,11–epoxyisogermacrone, Lewis acid catalysed rearrangement, formation of new carbon skeleton, 6399
7,8–epoxycembranoid, conformational analysis, 9915
diastereoisomeric rigid benzocondensed–, gas–phase acid–induced ring opening, 4683
epoxy–epimino– and γδ–epiminopentadienal derivs via rear– rangement, adduct nitroso–halogenobenzenes and cyclo– pentadiene via N–O and C–C bond breaking, 8323
intramolecular reaction, allyloxy radicals, 6–centered transition states, regio– and stereo–chemistry, 8417
methyl–8,14–β–epoxypimarate, prep and isomerisation leading to cycloditerpene via Grob fragmentation, 9187
organo–Al catalyzed rearrangement, route to optically active β–siloxy aldehydes, 6983
propargylic–, diastereoselective syn or anti opening, syn– thesis of α–allenic alcohols, 1677
regio and selective ring opening with trimethylsilyl azide in presence of alumin– ium and titanium isopropoxide, 1435
selective ring opening in presence of water, thiols and acetic acid, ceric ammonium nitrate catalyst, 9861
vinylbenzothiazole–, stereoselective synthesis, 3365

Esters see also Keto esters

α–unsat derivs, *syn*–selective *Michael* reaction with ketone enolate equivs, 3737
αβ–unsat esters, addition grignard reagents, prep alkylsolylketene acetals, 8331
α– or γ–allyl– β–hydroxy esters, *m*–chloro peroxybenzoic acid pro– moted synthesis of 2,5–disubstit tetrahydrofurans, 4143
β'–(functional alkyl) αβ–unsat esters, addition of bromine, stererselective synthesis of β–halo derivs, 9621
γ–acetylenic malonate anions, Pd–catalysed reaction with unsat halide, synthesis of (*E*)–arylidene and allylidene cyclopentanes, 6293
(±) methyl nonactate, synthesis, 4143
2–*exo*–bornyl croton– ates, diastereo– selective addition organo–Cu reagents, 9691
4–acetamidophenyl–, L–arginine, *p*–guanidino–L–phenylalanine, L–lysine, N2[D–fructos–3–O–yl and D–glucos–3–O–yl]–acetyl–L–lysine, potential acrosin inhibitors, 8831
4–ketopimelates via carbonylative dimerisation of siloxycycloprop–anes, 3935
allenic–, photoaddition to benzophenone, 2211
azidomethoxybenzyl–, of acids, protection of carboxyl group in peptide synthesis, 239
bicyclic allylic–, SN2 alkylation with Zn–Cu reagents, synthesis of isocarbocyclin, 1861
CF3–containing γδ–unsaturated carboxylic, prep via Rh–catalysed reaction of ethyl 3,3,3–tri–fluoro–2–diazo–propionate with allylic sulfides, 1629
crotonic–, α–sub– stitution, synthesis of natural derivs of 6–ethyljuglone 4287
cyclic enol–, photolysis with or without electron transfer photosensitiser, 9289
dicarboxylic diesters reactivity towards *in situ* generated di–halomethyllitnium, applications, 7875
in situ prep via electro–generation of acyloxytriphenyphosphonium ions, 767
methyl 12,13–epoxy– *cis*– and *trans*– communates, reaction with BF3 etherate, synthesis of 12– oxypimaranes, 4441
methyl 4–hydroxy–5–tetradecynoate, lipase–catalyzed kinetic resolution, synthesis of Japanese beetle pheromone, 6223
methyl carboxylates via electro–oxidation of ketones in MeOH in presence of alkali metal bromides, 895
methyl cinnamates, *ortho*–substit, stereoselective addition of R2CuLi, intramolecular assistance and solvent effects, 4739
methyl epijasmonate, synthesis of both enantiomers, 6999

methyl salicylate, synthesis of flavones, 5071
methyl–8,14–β–epoxypimarate, prep and isomerisation leading to cycloditerpene via Grob fragnebtation, 9187
phenyl–, as substrates, abzyme catalysed hydrolysis, 2503
pipecolic acid derivs via SnCl4–induced π–cyclisation of glycine cation equivs, 4039
sulfinylacetates, stereochemically matched, for double diastereoselection in SPAC reaction, 6601
trifluoromethylated conjugated dienoic esters, prep, 1629
xanthobilirubinate and nor–xanthobilirubin–ate, long range exciton coupling, 9759

Ester halogen derivativess
β–brominated β'–(functional alkyl) αβ–unsat esters, stereoselective synthesis, 9621
ethyl phenylsulfinyl fluoroacetate, reagent for prep of α–fluoro–αβ–unsaturated carboxylic acid esters, 4905

Esterification
trans–, enzyme catalysed in alkyl carboxylates, resolution sec alcohols, 7645
trans–, lipase– catalysed, meso–cyclopentanediols, 7569
trans–, methyl N–methylcarbamate to 1–naphthyl N–methylcarbamate, non MIC inbsecticides, 1249

Ethers
2–phenylsulfonyl cyclic–, prep of tetrahydropyran and tetrahydrofuran acetals and glycosidation reactions, 1329
aromatic orthodiethers, anodic trimerisation, 791
benzyl–, photoreaction with 1,4–dicyanonaphthalene, 5043
calix[4]arene monoalkyl–, synthesis, 2221
chiral (*S*)–allylic ether, cycloaddition with prochiral nitrone, route to (+)–mono–morine I, 9329
chiral enol–, asymmetric formation of C–N bonds, 5877
cobalt chloride catalysed cleavage with acyl halides, scope and mechanism, 3155
cyclic silyl enol–, *erythro*–selective aldol reaction with tricarbonyl (*o*–tri–methyl–silybenzaldehyde deriv)–Cr complexes, 3007
enol silyl–, Michael addition, organotin triflate as catalyst, 9773
isoalkyl–, in aqueous electrolytes, anodic oxidation, 725
new haloether from *Laurencia* with lauroxacyclododecane ring, structure and conformation, 2273
silyl enol– addition to t–butylcyanoketene, 3845
silyl enol–, diastereofacial selective reaction with chlorosulfides, 8753
silylenolethers, acetylation via norephedrine derived oxazolidines, 7925
syntheses via Bt–CRR'–OR prepared from benzotriazole, 2683
vinyl–, acetals as precursors, use in isoprenoid chain elongations by Claisen rearrange– ments, 6521

Etherification
phenylseleno–etherification unsat alcohols, 859

Flavanoids
biflavanoid derivs, flavan–3–ols, and 4–arylflavan–3–ols, stereo–and regio– selective oxidation with 2,3–dichloro–5,6–dicyano–1,4–benzoquinone, 6705
hoslundin, hoslundal and hoslunddiol from *Hoslundia opposita*, structures, 3555
thiosemicarbazones, reactions under acetylation con– ditions, 9305

Flavins
lampteroflavin as light emitter in *Lampteromyces japonicus*, synthesis, 6215

Flavones
synthesis from methyl salicylate, 5071

Flavours
humulene diepoxide A, hydrolysis, 933
sweet tasting diterpene glycosides, gaudi–chaudiosides A–E from *Baccharis gaudichaudiana*, 8515

Fluorescence
and restricted bond rotation in dipyrrinones following photoexcitation, 3719
probes, for localised membrane fluidity measurements, synthesis, 1459

Fluoro compounds
ethyl phenylsulfinyl fluoroacetate, reagent for prep of α–fluoro–αβ–unsaturated carboxylic acid esters, 4905
fluorination agents, combination of HF with organic bases, Report, 5329
fluorohydrin via Lewis acid catalysed rearrangement of 7,11–epoxyisogermacrone, 6399
gem–difluorocyclopropenes, via cycloaddition difluorocarbene and acetylenes with triple bonds, 7323
hexafluoroisopropanol for rearrangements via zwitterionic intermediates, 6725
perfluoroalkyl azaarenes with perfluoroalkyllithium–BF3 system, synthesis, 6231

Forensic
application of ninhydrin and analogs, latent fingerprint identification, Report, 8791

Fungi see also Antifungal agents
fungicide clozylacon, precursor of bio– logically most active isomer, two enantioselective syntheses, 5709
pathogenic–, synthesis of phytotoxins, (+)–gigantenone, (+)–phomenone and (+)–phaseolinone, 1649

Furanones
2H–cyclohepta[b]furan–2–ones via anodic oxidation of cyclo–heptatriene systems, 593
5–ylidene–2(5H)–furanones as dienophiles, effect of substituents on site selectivity in Diels–Alder cycloadditions, 8775
furan–2(5H)–ones, electroreductive cyclisations, syn– thesis of vernolepin, 383
furan–2–(5*H*)–ones, 5–substit, via regio– specific reaction of enaminofuranone anions with electro– philes, 3171
furan–2–(5H)–ones, synthesis and Diels–Alder reactions, 5481
o–iodophenoxyfuranones Pd–catalysed hydroarylation to ABC structures of AFM1 and austo– cystine, regiocontrolled annulation via o,o'–diiodine effect coupled with urethane tether, 9357

Furans
(*R*)–tetrahydro–5–oxo–2–(2–hydro xyethyl)furan, enzymatic approach, synthesis (*S*)–4–hexanolide, pheromone antipode of *Trogoderma glabrum* 3089
2,3–disubst–, synthesis, 2–(2–heteroaryl)imidazoline directed metallation studies, 9901
3,3–difluorotetrahydro–, 2,4–disubstit, via intramolecular trapping difluoroalkyl radicals by tethered olefins, 9439
difuransesquiterpenoids, athanasin, synthesis and abs and relative configuration, 9179
monotetrahydrofuran, reticulatacin, bioactive acetogenin from *Annona reticulata*, 2751

steroidal methyl– sulfonylfurans and a methylsulfonylthiophene, synthesis and androgen receptor affinity, 5099
tetrahydrofurans, 2,5–disubstit, *m*–chloroperoxybenzoic acid promoted stereoselective synthesis from α or γ–allyl–β–hydroxy esters, prep of (±) methyl nonactate, 4143
tetrahydrofurans, substit, stereo–selective synthesis, analysis by PMR, MNDO and MM2 calculations, 297

Genes
genetic engineering report on hybrid antibiotics, 6045
genetic study of kalafungin bio–synthesis, 6059
isopenicillin N synthase–, from *Cephalosporium acremonium, Penicillium chrysogenum and Aspergillus nidulans*, expressed at high levels in E.*coli*, 5991
putative bifunctional polyketide cyclase/dehydrase–, from *Streptomyces coelicolor* and *Strepomyces violaceoruber*, and cyclase/ O–methyltransferase from *Streptomyces glaucescens*, molecular genetic analysis, 6029

Geological data
24–*nor*–triterpenoids in sediments and crude oils, charact–erisation by comparison with syn– thesized standards, 3779
dual origin of sedimentary 2α–methylhapanoids, 7081
quincyte pigments from fossil quinones in eocene clay, 1095

Germination
stimulant, stigol derivs modified in position 5, 9793

Glucans
β–1,3–glucan synthesis inhibition, structure of L–687,781, 7563

Glycerides
diterpenoid acid–, from *Austrodoris kerguelensis*, 9743

Glycerophospholipids
ether–, structurally related to modulator, synthesis, 10023

Glycidol
(R)–, prep (+)–leuko– triene B4 methyl ester and 5–epimer, 7279

Glycolipids
glycosphingolipids, synthesis of D– *erythro*–sphingosine, 2835

Glycosides
β–O–glycosides via enol ether and imidate derived leaving groups, nitriles solvent, 9985
anthraquinone–anthrone–C–, from *Asphodelus ramosus* tubers, 4435
blocked aminomethyl–C–, via Henry condensations, 4,6–O–alkylidene pyranoses with 1,3–proton transfer catalyst, 6113
diglucoside interjectin, nyasicoside deriv from *Hypoxis interjecta* and *Hypoxis multiceps*, 6717
diterpene glycosides, gaudichaudiosides A–E from *Baccharis gaudichaudiana*, 8515
flavone–C–, with DNA binding activity from *Chrysopogon aciculatis*, 1815
hexosamine–inositol phosphates related to putative insulin mediators, 1
holothurinosides, antitumor, from *Holothuia forskalii*, 4753
ilexosides E,F,G,H and I from fruit of *Ilex crenata*, 7219
methyl 6–halogeno–6–deoxy–, intermed– iates for 6–alkylthio– and 6–alkylsulfonyl– 6–deoxyglycosides, 5185
N–, tjipanazoles A1 isolated antifungal agent from *Tolypothrix tjipanasensis*, 7739
O–benzylated 2–pyridyl steroidal–, tylophoroside and monoacetate from *Tylophora sylvatica*, 3545

Glycosylation
glycosyl donors and MeI as activator, prep of α linked sac–charides, 6435
regiospecific–, prep anti–HIV dideoxy– isosine and dideoxy– guanosine isosteres, 8949

Grignard reagents see Reagents

Halogenation
electro–fluorination, alkenes, phenan– throline, naphthalene and chlorobenzene in amine–HF, 705
fluorination agents, combination of HF with organic bases, Report, 5329
N–fluorination with cesium fluoroxysulfate 7447

Halogens
iodine atom transfer addition of alkyl iodides with alkynes, 6171
iodine atom transfer addition, α–iodocarbonyls to alkynes, precursors for radical trans–location, 6189
iodine oxidative coupling, diene– and trienediolates of unsaturated carboxylic acids, 1997
polybromochloride ions, anodic generation, use as controlled oxidising agents for ex–cell indirect electrooxidation of alcohols, 887

Herbicides
(+)–hydantocidin, construction of spiro–hydantoin ring at anomeric position of D–ribofuranose 2133
(+)–hydantocidin, synthesis of stereoisomers, 2145
(+)–hydantocidin, total synthesis, 2111,2121
1,1–dihaloalkyl–, synthesis and reactions, Report, 1563

Heterocyclic ring systems see also Bicyclic– and Polycyclic heterocyclic– compounds
π–donor–π–aceptor–, via Westphal con– densation, 7329
6– and 7–membered–, free radical ring–expansion of N–,O– and S–heterocyclic β–keto esters, 4847
6–membered–, conformational equilibrium, effect of N–borane coordination, 6903
bridged–ring–, via Pd catalysed regiospecific cyclisations, 9703
electron–rich–,(furans,thiophene,p urrole,indole) reaction with 3,6–dimethoxy–3,6–dimethylhex a–1,4–diene, 313
medium ring aza– cycles, synthesis, Report, 9131
reaction with azoalkenes derived from hydrazones of ethyl bromopyruvate, 5615

Homolgation
C2–, aromatic alde– hydes via 5–hydroxyisoxazolidines, 4121
C3–, synthesis of C19–skipped poly– enic pheromones, 3347

Hormones
(+)–,(–)– and (±)–7'–hydroxyabscisic acid, synthesis, 3259
20–hydroxyecdysone and side chain homologues from poststeron 3753
ecdysteroid biosynthesis in *Locusta migratoria*, synthesis of tritiated 3–dehydroecdysteroid precursor, 7067
insect–, prep of related epoxy derivs, use of dimethyldioxirane, 1291
plant growth inhibitors, oxygenated sterols from *Eichhornia crassipes*, 7129
precocene I, cyclic analogs, synthesis, prep of 2–spiro–benzopyrans, 4775
putative insulin mediators, related hexosamine–inositol phosphates, prep, 1
putative insulin second messenger, 6–O–(aminoethyl)–D,L–myo–inositol–1,2–cy–clic phosphate, synthesis, 21
serotonin, conformationally restricted analogs syntheses, 8653

serotonin–3 receptor ligand prototype via kinetically controlled azide displacement on allylic chloride, 5391

Hydantoins
(+)–hydantocidin, aldol addition ap– proaches to stereo– isomers, 121
(+)–hydantocidin, construction of spiro–hydantoin ring at anomeric position of D–ribofuranose 2133
(+)–hydantocidin, synthesis of stereoisomers, 2145
(+)–hydantocidin, total synthesis, 2111

Hydrates
formation, effect on Clemmensen reduction of pentacyclo–[5.4.0.0^{2,6}.0^{3,10}.0^{5,9}]–undecane–8,11–dione and pentacyclo–[6.4.0.0^{2,7}.0^{3,11}.0^{6,10}]– dodecane–9,1 2–dione, 9215

Hydrazines
in pyridine, reductive condensation with trichloromethylarenes, prep of benzaldehyde hydrazones or azines, 447

Hydrazones
acylhydrazones, methacrolein and ethylacrolein, intramolecular and intermolecular Diels–Alder reactions, 10053
monosubstit–, reaction with benzeneselenic anhydride, radical pathways, 1823
substit cyclopentanones, Fischer indolisation, methylene–indolines, indolenines and indoleniniums, 4915

Hydrocarbons
1,ω–difunctional–chains, prep via Cu–catalyzed coupling of alkyl tosylates and Grignard reagents, 'two–fold reaction', 6287
oxidation by H_2O_2 in pyridine catalyzed Cu complexes, Gif–type reaction, 6561
triangulanes, synthesis of bismethylene derivs, 5769

Hydrogenation
asymmetric–, 3–methyl–fumaric and maleic ester mono–aldehydes as NEPH–derived oxazolidines, 7357
carbamate–directed–, and kinetic resolution, N–protected α–(α–aminoalkyl)acrylates, 8869
selective–, conjugated enones, catalysed by iridium complexes, effect of charge distribution, 1965

Hydrogen bonding
catalytic–, cyclo– propanes, metal insertion into C–C bond, 1231
in bilirubin dianion by NMR and CD, 6163
Pd–catalysed–, alakenyloxiranes, prep of (–)–serricornin, 2991

Hydrolysis
enzymatic–, cyclopropanes, synthesis optically pure dictyopterenes A anbd C, 1215
enzymatic–, racemic N–acylated 1–amino– alkylphosphonic acids, prep of optically active 1–aminoalkylphosphonic acids, 3989
hops, hydrolysis of humulene diepoxide A, 933
N–monosubstituted carboxamides (without epimerisation) via intramolecular N–O acyl migration in acetoxy–pivalimides, 3925

Hydroxylamines
in pyridine, reductive condensation with trichloromethylarenes, prep of nitriles or 3,5–diaryl–1,2,4–oxadiazoles, 447
N–allyl–, microbial reduction to N–allylamines using *Clostridia*, 3329

Hydroxylation
of C=C double bond of (*R*)–2–hydroxy–3–enoic acids, 9035
regiospecific *para*–, aromatic carbamates by *Beauveria sulfurescens*, 1447
sclareol, manool and derivs by *Mucor plumbeus*, 8339
selective *ortho*–, phenols in copper(I) complexes, 4429

Imidazoles
2–(2–heteroaryl)imidazoline directed metallation studies, 2,3–disubst thiophenes and furans, synthesis, 9901
chiral imidazolidin–2–ones, synthesis of enantiomerically pure 2,3–diamino acids, 2263
econazole nitrate and miconazole nitrate, antifungal compds, characterization of autoxidation products, 6549
syn and anti–oriented imidazole carboxylates, models for histidine–aspartate couple in serine proteases and other enzymes 2649

Imides
N–acyl–*o*–quinone monoimide, as diene or dienophile, Diels–Alder reactions, solvent effect result of frontier molecular orbital interaction, 5857

Imines see also Schiff bases
α–chloroimines, electrophilic reduction, synthesis of β–chloroamines, 3407
α–chloroimines. reactions with homop[phthalicanhydride, synthesis and molecular structure of 3,3a–dihydrofuro–[3,4–*c*]–isoquinoline–1,(4H,9bH)diones, furo–[3',4',9,9a]–8,9,16,16a–tetrahydro–1H,3H,11 H–dibenzo–[*a.g*]quinolizine–1,11–diones and related compds, 3375
β–chloroaldimines, synthesis of 1–amino–2,2–dialkylcyclo–propane carboxylic acids, 4723
β–chloroimines, synthesis of 2,2–dialkyl– cyclopropylamines, and synthesis of 1–amino–2,2–dialkylcyclopropanecarboxylic acids, 3389
condensation with titanium enolates of 2–pyridylthioesters, prep β–lactams, 8767
N–phosphinoylimines and N–sulphonylimines directly from aromatic aldehydes, 5561

Iminium salts
allylsilane N–acyliminium ion reactions(2), synthesis of (±)–α–allokainic acid, 3451
N–acyliminium ions, stereoselective addition organo–Cu reagents, prep of *trans*–2,5–disubstituted pyrrolidines, 573
N–acyliminium salts via reaction of nitrilium salts with aldehydes, 205

Immunostimulation
activity, pepidoglycan monomer derivs, 8407

Indanes
1–(but–3–enyl)indanes, substit, intra– molecular arene– olefin cycloaddition, 3059

Indoles
2–(1,3–dithian–2–yl)indoles, synthesis and reactivity, effect of N,N–diethylcarbamoyl indole protecting group, 7911
and indoline chromophores, incorporation into new antioxidants, 4383
containing polyaza systems, synthesis, Report, 6851
electrosynthetic aspects of anodic reactions, 737
fused[1,2–a]systems. tetrahydropyrido– and tetrahydro–azepino[1,2–*a*]indoles via Dieckmann/ring expansion, 4645
reaction aromatic aldehyde, synthesis of diindolyl–menthanes, 9225

thiazoyl substit–, phytoalexin camelexin produced in leaves of *Camelina sativa*, 3909
[b]annellated–, via Diels–Alder reactivity of N–benzoylindole–2,3–quinodimeth ane, 1925

Indolisation
Fischer–, substit cyclopentanones methylene–indolines, indolenines and indoleniniums, 4915

Infra red spectra
alkaloids from dendrobatid poison frogs, further pumiliotoxins and allopumiliotoxins and reassignment of the keto function in pumiliotoxin 307F, 5415
dehydro–4–iminoallantoin and covalent adducts, structure, 317
dithiolene dyes with strong near–IR absorption, synthesis, Report, 909

Inhibition
β–1,3–glucan synthesis–, structure of L–687,781, 7563
potential–, acrosin, 4–acetamidophenyl esters and 4–acet– amidoanilides of L–arginine, *p*–guan– idino– L–phenylalanine, L–lysine, N^2[D–fructos–3–O–yl and D–glucos–3–O– yl]– acetyl–L–lysine, 8831

Inositols
6–O–(aminoethyl)–D,L–myo–inosi tol–1,2–cyclic phosphate, putative insulin second messenger, synthesis, 21
amino inositol derivs as α–glucosidase inhibitors, 7537
D– and L–*myo*–inositol 1–phos– phorothioate, substrates for inositol monophosphatase, 3895
hexosamine–inositol phosphates related to putative insulin mediators, 1
myo–inositol 3,4–bis– and 1,3,4–tri– sphosphate, rac 3–methylphosphonate analogues, synthesis, 4709

Insecticides
non MIC–, transesteri– fication of N– methylcarbamate to 1–naphthyl N–methylcarbamate, 1249
phototoxic 2,2':5,2''–terthiophene derivs with substit in 3'– of 5–position, synthesis, 8443

Insects
antifeedant trenudine, isolation from seeds of *Trewia nudiflora*, 4133
antifeedants from *Azadirachta indica*, synthesis of hydroxy–dihydrofuran acetal fragments for biological evaluation and azadirachtin total synthesis, 6813
antifeedants, *neo*clerodane diter– penoids, chemical transformations of teubotrin, 10129
Azadirachta indica, chemistry of antifeedants, 9231

Insertion reactions
C–H bond and heteroatom–H bond–, Rh(II)carbenes, and subsequent reactions, Report, 1765
metal–, into C–C bond, catalytic hydrogenolysis of cyclopropanes, 1231
Rh2(OAc)4 mediated C–H–, α–diazo– ketones, regiocontrol C=C bond, 7403

Inversion reactions
sat 6–membered ring, effect of exocyclic conjugation, NMR N–substit morpholines, 7465
tertiary and benzylic centers, oxirane ring opening with alcohol catalysed organotin phosphate condensates, 7625

Iridium and compounds
complexes, catalysis, selective hydrogenation of conjugated enones, effect of charge distrib– ution, 1965

Iron and compounds
acetyl complex [(η^5–C5H5)–Fe(CO)–(PPh3)COCH3] derived enolates and 2,3–O–isopropylidene–D–glycer aldehyde, aldol reaction, 10077

Isocoumarins
AI–77–B, gastro–protective substance from *Bacillus pumilus* AI–77, synthesis, 8635

Isocyanates
dihaloalkyl–, syntheses, Report, 1563

Isoflavones
2,7,4'–trihydroxy–isoflavone by oxidative rearrangement con– version of liquiriti– genin, 5969

Isomerisation
1H–4,4a,5,9b–tetrahydroindeno[1, 2–*b*]pyridines 7429
methyl–8,14–β–epoxypimarate, leading to cycloditerpene via Grob fragmentation, 9187
sulphur induced–, 2β–methylhopanoids in sediments, 7081

Isomers
conformational–, O–alkyl–*p*–*t*–butyl–calix[4]arenes, syntheses, 4325
geometrical–, manzamine C, synthesis, 8067

Isoprenoids
all–*trans* acyclic isoprenoid pheromone components, synthesis, 6533
chain elongations by *Claisen* rearrangements using acetals as precursors of vinyl ethers, 6521
isoprene, direct metallation, 2041

Isoquinolines
3–aryl–3,4–dihydroisoquinolinium salts, oxidation to 3–aryl–isoquinolinones, 9253
3–arylisoquinolinones, prep and structure, 9253

Isothiocyanates
2–deoxyglycosyl–, prep and prop, 5797
dihaloalkyl–, syntheses, Report, 1563

Isotope effects
D–isotope studies, dehydration of alcohols with triphenylphosphine–CCl4, 949
sesitive–, branched pathway to cephalosporin biosynthesis, 9881

Isotopic labelling
deuterated cyclododecanone, conformational features, 8579
isotopically sensitive branching, eval– uation, multiple product formation by monoterpene cyclases, 5933

Isoxazoles
5–(tributylstannyl)isoxazoles, synthesis and prep of bicyclic heteroaromatics, 5111

Isoxazolidines
5–hydroxyisoxazolidines, C2–homolgation of aromatic aldehydes, 4121

Kainoids
analogs, enantio– selective synthesis via Co–mediated cyclisations, 155

Ketenes
diphenylketene and di– phenylketen–N–(4—methylphen yl)–imine, thermal and photo 2+2 cycloadditions to 5–membered heterocyclic 2,3–diones, 3045
fluorine–substit–, *in situ* generation and trapping, 2065
ketene–iminium cations, cycloaddition with olefins, access to (±)–grandisol, fragranol and related cyclobutane bye– products, 5133
t–butylcyanoketene, addition to silyl enol ethers and conjugated dienes, 3845

[4+2] cycloaddition with 1,3–diaza–1,3–butadienes, 1473

Keto acids,
3–deoxy–D–manno–2–octulosonic , 3– deoxy–D–arabino–2–heptulosonic and 2–keto–3–deoxy–D–gluconic acids, synthesis from synthetic intermediates, 5625
arylalkyl and arylalkenyl γ– and δ–keto acids, baker's yeast reduction, 7887

Ketoenols
α–keto enols, photosensitised oxidation to 2–oxasteroids, 8361

Keto esters
β–, N–,O– and S–heterocyclic, free radical ring–expansion, 4847
β–, precursors, enantiospecific routes to 3,4–disubstituted azetidinones, 1137
1'–ethylpropyl 2–methyl–3–oxo–pentanoate, micobial reduction, synthesis of (–)–sitophilate, 7237
chiral αα–dialkyl–γ–ketoesters, Report, 9503
dihalomethylketoesters, via reaction of dicarboxylic diesters with *in situ* generated dihalimethyllitnium, 7875
ethyl 3–oxo–4–tri–phenylphosphoranyl–idene–buty rate, reaction with 4–alkylidene–5(4H)–oxazolones, 8907

Ketones see also Chalcones, Cyclic ketones, Enones
2,3–epoxycyclohexanones, rearrangement, route to (–)–frontalin and (–)–malyngolide, 6967
αβ–epoxy–, and α–chloro–, reaction with trialkyl–stannylmethyllithium, 3281
αβ–epoxy–, formation of β–hydroxy– ketones by photo–induced single electron transfer, 7775
α–haloacetophenones, baker's yeast reduction, 2073
βγ–unsat, acid induced rearrangement,, 2081
β–diketones, highly congested via reaction of copper β–diketonates under free radical condit– ions, 8031
acetophenone and anti–acetophenone oxime methyl ether, enantioselective reduction with borane, use of 1,2– and 1,3–amino alcohols, 4941
acetylenic α– and γ–diketones via anodic oxidation of diarylacetylenes and diaryldiacetylenes, 799
benzophenone, photoaddition to allenic esters 2211
bicyclic mono–, selective anodic oxidation, 5463
cage diketones, stereospecific, state sodium borohydride reduction, 6571
electro–oxidation in MeOH in presence of alkali metal bromides, 895
trifluoromethyl–, and related fluorinated compds, prep, Report, 3207
via silyl enol ethers, 3,6–dimethoxy–3,6–dimethyl–cy clohexa–1,4–d iene α–arylation, 9119

Kinetics
8–amino–, 8–methylamino– and 8–dimethylamino–adeno—sines, studies, 4693
acid–catalysed racemisation of catecholamines, 5019
controlled displacement by azide on allylic chloride, synthesis of sero– tonin–3 receptor ligand prototype, 5391
measurements, high press techniques, Report, 8463
nonconjugated dienes, addition to carbenium ions, retarding (–I)–effect of second double bond, 219
perborate oxidation, organic sulfides, 8733
reaction rates, enhancements in nonpolar solvents, effects of ion pairs within active sites of enzymes, 2617

Labelling
photoaffinity–, bifunctional reagent, synthesis of 1,3,5–trisubstit aryl diazirine, 5603

Lactams
α–keto– and αβ–unsaturated–bicyclic lactams, prep, Report, 9503
β–lactam metabolites, via conversion deuterated analogs δ–L–α–aminoadipoyl–L–cystei nyl–D–allylglycine, 8223
β–lactams, *in situ* prep via electro–generation of acyloxytriphenyphosphonium ions, 767
β–lactams, synthesis from alkylthioimidates, 6759
β–lactams, via condensation titanium enolates of 2–pyrid–ylthioesters with imines, 8767
3–amino–2–azetidinones, leterature survey, Report, 7503
aza–β– and aza–γ–, conversion to benzodiazepinones and benzodiazocinones, 9599
bicyclic lactamdione via oxidative cleavage tricyclic pyridone, 9981
bicyclic–, metallations and stereodifferential alkylations, Report, 9503
bis–β–lactams, synthesis, 5379
chiral non–racemic bicyclic–, construction natural and unnatural compds with quaternary C–centers, Report, 9503
clavulanic acid biosynthesis, isolation of dihydroclavaminic acid intermediate, 4089
cyano β–lactams via cyanoketenes, 8161
indolactam analogues by microbial conversion, 5453
monocyclic β–lactams, enantiosepecific synthesis from ester enolates and silylimines, 9061

Lactones
αβ–unsaturated butenolides, electroreductive cyclisation limited by acidic protons at C5 of butenolide ring and C1 of side chain, 383
α–alkylidene–, via deiodination of iodoalkylidene lactones, 5203
β–vinyl–γ–butyrolactones via Pd catalysed reaction of vinyl triflates with Z–2–buten–1,4–diol, 1525
δ–lactones from streptenol A, chiral building block from *Streptomyces*, 3335
γ– and δ–lactones via baker's yeast reduction, arylalkyl and arylalkenyl γ– and δ–keto acids, 7887
γ–aryl–γ–butyrolactones via carboxy–methylation of styrene derivs, 831
γ–lactones, γ–substit and δ–substit δ–lactones via regioselective β–scission alkoxyl radicals from transannular hemiacetals, 7245
π–allyltricarbonyliron lactone complexes, synthesis β–lactone esterase inhibitor (–)–valilactone, 9929
(+)–and(–)–*endo*–norbornene lactone, synthesis via application of enzymatic resolution of norbor–(ne)nylmethanols in organic media, 5513
aldonolactones, methylenation, access to carbohydrates, 1655

biologically active tridecapeptide–, from *Theonella swinhoei*, structure of theo–nellapeptolide 1D, 2169
corresponding to γ–hydroxyisoleucine, synthesis and structure, 6469
cytotoxic bis–tetrahydrofuranic g–lactone acetogenins, molvizarin and motrillin from *Annona cherimolia*, 8195
enantiomeric 4–acyl butanolides, baker's yeast reduction, 9247
formation from allylic cyclic ethers, 10129
goniobutenolides and goniofupyrone, isolation from *Goniothalamus giganteus*, 9751
heptonolactone, synthesis and effect of (1*S*,2*R*, 6*R*,7*S*)–1,2,6,7–tetrahydroxy pyrollizidine on glycosidases, 131
intermediate in synthesis of pharmacologically active compds, *cis* and *trans* conformations of 2,3–diphenyl–1–oxabicyclo[3.1.0]hexanes, 9629
macrocyclic–, intramolecular SH2' macrocyclisations, 5901
reactivity towards *in situ* generated di–halomethyllitnium, applications, 7875
sesquiterpene–, biotransformation of 6β–eudesmanolides functionalized at C–3 with *Curvularia lunata* and *Rhizopus nigricans* cultures, 5811
spirolactones via Diels–Alder reaction of electron–rich dienes and protroanemonin, 5895
three bioactive stryllactones from *Goniothalamus giganteus*, 9751
two–, formation from 1,3–dioxin–4–ones having hydroxyalkyl group at 6–position, difference in ring opening and closure, 5689
unsat 9–membered–, Claisen rearrangement approach to synthesis of obtusenyne, 7171

Lactonisation
phenylseleno–, unsaturated carboxylic acids, 859
spirolactonization of cycloalkanones, 7037

Lead and compounds
lead tetraacetate oxidation of α–oxoketene dithioacetals, 305

Leukotrienes
(+)–leukotriene B4 methyl ester and 5–epimer from (R)–glycidol, 7279

Lignans
diarylbutane–, structure, synthesis and isolation from *Phyllanthus niruri*, synthesis of 5'–desmethoxy niranthin and antitumor extractive, 8931
dihydrocubebin and derived tetrhydrofuran, reaction with DDQ, 1275
neolignans, synthesis via anodic oxidation of phenols, 635
non phenolic bis–benzocyclooctadiene lignan lactones via biaryl oxidativec coupling by ruthenium dioxide in fluoro acid medium, 3787
phylllanthin and halo derivs oxidative coupling with TTFA, DDQ, Li/THF, synthesis di–benzocyclooctadiene system and phyltetralin, 8277

LImonoids
proto–, phebalo– parvilaactone from *Phebalium squamulosum*, structure, 3611
xyloccensin I and J, isolation from *Xylocarpus granatum* and *moluccensis*, proposed structures, 8943

Linker molecules
bifunctional–, synthesis of 2–methyl–2–(3–carboxypropyl)–cy clopent–4–en–1,3–dione, 5231

Lithiation
1,2,3–triazolo[5,1–*b*]thiazoles leading to 2,4–disubstituted thiazoles, 2861
polylithiation, 1,3,5– and 1,2,4–trimethoxybenzenes, 9279

Lithium and compounds
5–hexenyllithium cyclisation, synthesis of (±)–cuparene, 7727
allyllithium generation, regio– and stereocontrol of allylphenyl thioether lithiation, lavandulol terpenoid syntheses, 9727
dihalomethyllitnium, *in situ* generated, reactivity towards dicarboxylic diesters and lactones, applications, 7875
lithium perchlorate catalysis, hetero Diels–Alder reaction, Li cation effect, 8399
n–butyllithium, reactivity with P–mesityl phosphirenes, 6673
R2CuLi, stereoselective addition of *ortho*– substit methyl cinnamates, intramolecular assistance and solvent effects, 4639
simultaneous complexation by *syn*–bishydroxymethyl–14–crow n–4, 2947
trialkylstannylmethyllithium, reaction with αβ–epoxy–, and α–chloro ketones, 3281

Macrocycles
anodic oxidation, 1',8'–disubstituted *a,c*–biladiene salts, 685
binucleating polyaza macrocyclic and macrobicyclic ligands, dioxygen affinities of Co–complexes 6895
complexes with alkali metal cations, stability constants, 2903
coranands incorporating pyrylium, thiopyrylium and pyridine subunits, synthesis and con–formation, 1977
cyclic tetramers from 3,5–disubst 4– hydroxybenzene sulfonyl chlorides, 7353
lactones, intramolecular SH2' macrocyclisations, 5901
maytansinoids, C–3 to C–10 portion, synthesis, 4133
new lactone antibiotic RP 63834, structure, 61
octa–alkylporphyrins, functionalization of alkyl substits, reactions, 6887
phosphine polyoxides with two carbon bridging unit between P atoms, 403
syn–bishydroxymethyl–14–crown–4, possible preorgan ized molecule for simultaneous lithium complexation and anion solvation, 2947
tetraiminocyclophane with two biphenyl units in macroring, oligomerisation in soln, 1425
triaza ligands, for coordination, indium, gadolinium and thorium, 8863

Magnesium and compounds
t–butylmagnesium chloride, reaction with 1,4–dinitro–benzene, substitution or addition, 1091

Manganese and compounds
mediated electro–synthesis of sorbic acid precursors, 809
Mn–acetate, as electrochemical mediator for C–C bond formation, 831
Mn–based, tandem radical cyclisation, formation, 7– and 8–membered rings, 8663

Mass spectra
bryostatins 14 and 15, structures, 3601
cytotoxic peptides, fellutamides A and B, from *Penicillium fellutanum*, 8529
isotactic poly–methoxy–1–alkenes from *Scytonema ocellatum*, structure and synthesis, 4889
tripeptide Boc–L–prolyl–L–propargyl–glycyl–glyc ine methyl ester, structure, 3947

Mechanisms
δ–L–a–aminoadipoyl–L–cysteinyl –D–valine enzymatic conver– sion to isopenicillin N, monocyclic β–lactam involve– ment, 457
2(ω–hydroxyalkyl–4–(ω'–hydrox yalkylamino)pht halazin– 1(2H)–ones, chain length dependent reactivity in azeo– tropic HBr, 4457
acid–catalysed racemisation of catecholamines, 5019
action, molecular biology and bio– chemistry of uroporphyrinogen III synthase, 6003
addition and substit, mechanism, photo– substitution of aromatic and heteroaromatic rings, 5029
and product selectivity, electrochemical trifluoromethylation of olefins, 555
and stereochemistry, fatty acid and polyketide biosynthesis using chiral malonates, 6015
and synthetic aspects, photooxidation of 1,3–dienes Report, 1343
aromatic version of radical nucleophile displacement reactions, reconsideration, 6577
bicyclo[4.2.0]octan system, rearrange– ment to bicyclo– [3.2.1]octan system, 229
chiral non–racemic bicyclic–, construct– ion natural and unnatural compds with quaternary C–centers, Report, 9503
cobalt chloride catalysed cleavage of ethers with acyl halides, 3155
concerted–, acylamidation, *syn*– stereospecificity of reaction, 5577
dihydrocubebin and derived tetra– hydrofuran, reaction with DDQ, 1275
electro–oxidation, α–sulfonyl carb– anions, formation dimeric olefin and disulfone, 777
electrolytically generated superoxide, substitution of 5–halo–1,2,3–triazines, 4317
formation of polycyclic oxygen aromatics, 5245
gas–phase acid–induced ring opening in diastereoisomeric 9,10–oxides derived from *trans*– 1,2,3,4,4a,10a–hexahydrophenan threne, 4683
information from volumes of activation in high press reactions, Report, 8463
inhibition, glycinamide ribonucleotide transformylase by multisubstrate adduct, 2351
isopenicillin synthase action–, via synthesis δ–L–α–aminoadpoyl–L–cystein yl–D–allylglycine and 8 deuter– ated analogs, 8203
Lewis acid catalysed rearrangement, 7,11–epoxyisogermacrone, formation of new carbon skeleton, 6399
oxidative rearrangement conversion of liquiritigenin to 2,7,4'–trihydroxy–isoflavone, 5969
p–mentha–1,3,8–triene and structural related *p*–menthadienes, photochemical reactions, 3037
perborate oxidation, organic sulfides, 8733
phenylselenenyl chloride, reaction with trisubstituted olefins in methanol, 4211
PM3 study, reactions of propene with singlet oxygen and enophiles, 1707
reaction, symmetrical dicarbonyl dichlorides with imino– phpsphoranes, elimination triphenyl phosphine oxide or dichlorotriphenylphosphorane, 53
rearrangement–, 1,3– dithiolane sulfoxides, 8091
role of CO2, synthesis of methylcarbamates from amines and dimethylcarbonate in the presence of CO2, 9489
Ruhemann's purple, reaction ninhydrin with amine funct– ionalities, Report, 8791
Staudinger reaction, benzal–anilines and phenylacetic acid chloride, 7417
tandem aza–Wittig reaction/electrocyclic ring closure, synthesis of quinazoline ring, 5819

Mefloquine see Drugs

Membranes
biological–, mono– disperse perfluoro– polyethoxylated amphiphilic compds with two–chain polar head, 411
fluidity measurements, synthesis of fluorescent probes, 1459

Mercury and compounds
mediated routes to side–chain funct– ionalised 1,7– dioxaspiro–[5.5]undecanes, 1985

Mesolonic compounds
derived from [1,3,4]– thiadiazolo]2,3–*c*]– and [1,3,4]thia– diazolo[3,2–*d*][1,2,4]triazines, prep via iminophosphorane–mediated regioselective annelation of 1,3,4– thiadiazole ring into 1,2,4–triazine ring, 6747
solanaceous alkaloids in transgenic plant teratomas integrated with genetically engineered genes, 5955

Metabolites
(+)–,(–)– and (±)–7'– hydroxyabscisic acid, synthesis, 3259
(+)–hydantocidin, total synthesis, 2111
(–)–canadensolide, stereoselective synthesis from D–glucose, 519
6–ethyljuglone, natural derivs, synthesis, 4287
A82775B and A82775C from order *Sphaeropsidales*, isolation and structure, *3633*
dibromotyrosine derivs, new from *Pseudoceratina crassa*, 1809
fungal–, structure of saponaceolides B, C and D, new C–30 terpenoids from *Tricholoma saponaceum*, 7109
indole–diterpene mould–, paspalicine study, synthesis of 3',4',7',7'a,9',10'.11',11'a–octa hydro–4',4',7'a–trimethylspiro[1 ,3–dioxolane]–2,8'(6'*H*)–2'*H*–3' ,5'a–epoxynaphth–[2,1–*b*]oxepin –2'–one, 6407
secondary–, 3– hydroxy–5–decanolide from *Cephalo– sporium recifei*, enantioselective synthesis of 4 stereoisomers, 3335
tilivalline from *Klebsiella pneumoniae* and analogs, stereo– selective synthesis, 5051

Metallation
4–chloropicolin– and 2–chloroisonicotin–anilides, prep of 2,3,4–trisubstituted pyridines, 1697
alkali metal cations, complexes with macrocycles, stability constants, 2903
and stereodifferential alkylations, bicyclic lactams, Report, 9503
bimetallation/monometallation, mono– metallation/bimetal– lation or three mon– metallations of 1,3,5– and 1,2,4–trimethoxybenzenes, 9279
direct metallation of isoprene, 2041
directed–, 2–(2– heteroaryl)imid– azoline studies, 2,3–disubst thiophenes and furans, synthesis, 9901
stannylmetallation, conjugated enynes, 1163
trialkylsilyl and trialkylstannyl cuprates, addition to β–unsaturated enones, intermediate π–complexes, 1177

Metals see also Transition metals and individual metal compounds
1–benzothiazolyl–2–aza–pentadien yl metals, coupling with C–electrophiles, 4465
3,3–dichloroallyl–, reactions with substituted benzaldehydes, effect of cations on regioselectivity control, 1485

alkali salts, salinomycin and narasin, complete assignment ^{1}H and ^{13}C NMR, 10109
coupling phenyl– sulphenyl–, phenyl– sulphinyl– and phenylsulphonylpentadienyl metals, regio– and stereo–chemistry, 7489
dissolving bimetals, reduction of organic functional groups, 441
hydrides, photo– reduction 1,1–diphenyl–2–haloethenes, 9071
indium, gadolinium and thorium coordination, synthesis triaza macrocyclic ligands, 8863
insertion into C–C bond, catalytic hydrogenolysis of cyclopropanes, 1231
lithium, sodium and potassium chloroallyl systems, theoretical and experimental study, 8739
trivalent Ga and Fe ions, complexation with new multi–dentate ligands with 3–hydroxy–6–methyl–2–pyridyl donor groups, 357

Microbial reactions
bacterial protein factories, review, 2543
baker's yeast reduction, α–haloacetophenones 2073
baker's yeast reduction of 1,3–dioxin–4–ones with chiral oxoalkyl groups at 6–position to alcohols, EPC synthesis, 6197
baker's yeast reduction, arylalkyl and arylalkenyl γ– and γ–keto acids, 7887
baker's yeast reduction, enantiomeric 4–acyl butanolides, 9247
hydroxylation of sclareol, manool and derivs by *Mucor plumbeus*, 8339
indolactam analogues by microbial conversion, 5453
Japanese beetle and mosquito oviposition pheromone, synthesis, 1145
reduction, 1'–ethylpropyl 2–methyl– 3–oxopentanoate, synthesis of (–)– sitophilate, 7237
reduction, N–allyl–hydroxylamines to N–allylamines using *Clostridia*, 3329
regiospecific *para*–hydroxylation of aromatic carbamates by *Beauveria sulfurescens*, 1447

Microorganisms
baker's yeast, oxido–squalene–lanosterol cyclase, partial purification and characterization, 5925

Migration reactions
a[1,2]–methyl–, Fischer indole syn– thesis of 8–methyl–5–substituted–1–oxo–β–carbolines, 1737

Models
branched tetra–, nona–and deca–ribonucleotides, syntheses modelling lariat of pre–mRNA processing reactions, 6305
chiral NADH–, compd with 1,6–naphthyrid– inone structure, syn– thesis via coupling reaction, 9363
cyclic branched tetraribonucleoside, synthesis modelling lariat pre–mRNA processing reaction, 9659
dipyrrinone esters, synthesis and study of *Z*{*E* photo–isomerisation in rats,1945
Felkin–Anh–, conformational rotational profiles, propionaldehyde, chloroacetaldehyde and 2–chloropropionaldehyde, 8991
folate cofactor–, conformation of enaminones, Lewis acid induced cyclisation and synthesis of enantiomerically pure pyrrolo[2,3–d]carbazole system, 4255
folate cofactor–, synthesis of the 21– epimer of 20–de– ethyl–3,17–dioxo–16–ethoxycarbonyl—1–methylas pido– spermidine, 4165
host–ligand–, theoretical study chemical interactions, crown ether–cation complexes, 9317
pentameric and heptameric branched–RNA modelling, lariat structure of group II or nuclear m–RNA introns studied by one– and two–dimensional NMR at 500 MHz, 3183
purine–pyrimidines base pair, selective intracomplex reaction of pendant groups, 10095
syn and anti–oriented imidazole carboxylate–, for histidine–aspartate couple in serine proteases and other enzymes 2649
transition state modelling, comp–utational study of stereoselectivity in chiral boron enolate aldol reactions, 3471

Molybdenum and compounds
phosphomolybdic acid on silica gel, phenol–coupling, biomimetic synthesis of dimeric phenathrene derivs, 8601

Mutagenesis
site–directed–, Cys 139 in isopentenyl diphosphate isomer–ase using 'counter' PCR amplification of an expression plasmid, 5919

Mutation
major–, induced by UV light, C!T transition at dTpdC sites, photodamaged DNA for cis–syn cyclobutane dimer of dTpdU, 2579

Named reactions
αβ –γδ–unsaturated nitriles, prep via *Wittig–Horner* reaction of β–substit cyclohex–2–en–1–ones with diethyl cyanomethyl phosphonate, 993
π–donor–π–aceptor heterocycles via *Westphal* condensation, 7329
(3H)–2–furanones, synthesis and *Diels–Alder* reactions, 5481
1,2,3,4,6,7,12,12*b*–octahydroindolo[2,3–*a*]quinoli zines, 2–substit, prep, stereochemical course of modified *Polonovski* reaction and mercuric acetate oxidation, 6371
2–aza–(7)–metacyclophanes via *Sommelet– Hauser* rearrange–ment, hexahydro– (1H)–2–benzazoninium ylides, 47
5–oxo–9–decanal, *Luche–Barbier* selective addition to aldehyde with allyl or propargyl bromide, 1985
acid chlorides, *Friedel–Crafts* reaction with ethene, di–addition and molecular rear rangement, 4991
asymmetric *Sharpless* epoxidation of divinylcarbinol, *erythro*–D– and L–4–pentenitols by hydrolysis of epoxy–4–pentenols, 2195
blocked amino–methyl–C–glycosides, route via *Henry* condensations of 4,6–O–alkylidene pyranoses with a 1,3–proton transfer catalyst, 6113
Boulton–Katritzky rearrangement, 1,2–alkylenedioxynitrobenzofuroxans, effect of heterocyclic side ring, 7157
Cadiot–Chodkiewicz coupling, amphiphilic diacetylenes with amino or ammonium functionality, 9947
Clemmensen reduction, pentacyclo–[5.4.0.0^{2,6}.0^{3,10}.0^{5,9}]undecane–8,11–dione and pentacyclo–[6.4.0.0^{2,7}.0^{3,11}.0^{6,10}]–dodecane–9,1 2–dione, effect of hydrate formation, 9215
Dieckmann/ring expansion to tetrahydropyrido–and tetrahydroazepino–[1,2–*a*]indoles, 4645
Diels–Alder cycloadditions, 5–ylidene–2(5H)–furanones as dienophiles, effect of substituents on site selectivity, 8775
Diels–Alder reactions, P–chloro(bistrimethylsilyl)–methylene phosphine, 71
Diels–Alder reactions of N–acyl–*o*–quinone monoimide behaving as diene or dienophile, frontier molecular orbital interaction, result of solvent effect, 5857

Diels–Alder reactions of protroanemonin with heterosubstituted dienes, synthesis of polyfunctional oxa–spiro [4.5]decanes, 5895
Diels–Alder reactions, role of high press, Report, 8463
Diels–Alder reactions, β–cyanocyclobutenone, compared with β–cyanocyclo–pentenone, 8167
enantiomerically pure vinylketene acetals functioning as dia–stereoselective dienes in *Diels–Alder* reaction, catalysis and facial selectivity, 4519
Gif–type reaction, H2O2 oxidation of alkanes in pyridine catalyzed Cu complexes, 6561
inter– or intramolecular reaction with alkenes, tandem *Michael* addition– 1,3–dipolar cycloaddition, 4477,4495
intramolecular Diels– Alder reactions, computational study of 2–(2–ethynyl–phenyl–X–)pyrimidine reactivity, 1753
intramolecular *Diels– Alder* reactions of sulphonyl–substituted trienes, 3095
intramolecular *Pinner* reaction, synthesis of gastroprotective substance AI–77–B from *Bacillus pumilus* AI–77, 8635
inverse–electron–demand *Diels–Alder* reactions of condens– ed pyridazines, synthesis of phthalazine derivs from pyridazino[4,5–*d*]pyridazines 3959
isoprenoid chain elongations by *Claisen* rearrangements using acetals as precursors of vinyl ethers 6521
Katsuki–Sharpless kinetic resolution N–benzyloxycarbonyl–3–hydrox y–1–pentenylamine, (–)–supinidine synthesis, 7635
lithium perchlorate catalysis, hetero *Diels–Alder* reaction, Li cation effect, 8399
Maillard products 5,6–dihydro–3,5–dihydroxy–4H –pyridones from reaction of 6–O–substit hexoses with prim amines, 9351
Mannich reactions, extended, Report, 2683
methacrolein and ethylacrolein acylhydrazones, intramolecular and intermolecular *Diels–Alder* reactions, 10053
methyl–8,14–β–epoxypimarate, prep and isomerisation leading to cycloditerpene via *Grob* fragmentation, 9187
methylene–indolines, indolenines and indoleniniums, Fischer indolization of substit cyclo–pentanones 4915
Mitsunobu reaction with retention, synthesis conformationally restricted analogs of serotonin, 8653
Monte Carlo simulations, free energy calculations to quantify association of nucleotide base pairs in chloroform, 2491
N–benzoylindole–2,3–quinodimet hane, *Diels–Alder* reactivity, application for synthesis of [b]annellated indoles, 1925
O– and S–heterocyclic–, oxidative formylation and chloromethylation in *Vilsmeier reactions*, 1303
polyquinenes, synthesis via *Weiss* reaction, Report, 3665
pyrido annelation by tandem *Wittig*/– elctrocyclic ring–closure, prep of pyrazolo[4,3–*c*)– and pyrazolo[3,4–*c*]pyridine derivs, 6737
pyrimido[2,1–b]thiazin–6–one by retro *Diels–Alder* reaction, 7673
quinazoline ring, synthesis by tandem aza–*Wittig* reaction/–electrocyclic ring closure, 5819
Reformatsky, stereoselective reactions of 3–(2–bromopropionyl)–2–oxazol idone derivs with aldehydes, 2821
Staudinger reaction, benzal–anilines and phenylacetic acid chloride, 7417
stereocontrolled synthesis of 1b–methylcarbapenem key intermediate by *Reformatsky* reaction of 3–(2–bromo–propionyl)–2–oxazol–idone derivs with 4–acetoxy–2–azetidinone, 2801
syn–selective *Michael* reaction of enamines with 2–(1–alkenyl)–1,3–dioxolan–2–ylium cations *in situ* generated from 2,2–dimethoxyethyl 2–alkenoates, 3737
thio–*Claisen* rarrangement, (Z)–α– hydroxyketene–dithioacetals to α–allylic–β–hydroxydithioester s, stereo– control of two chiral centers, 6275
unsat 9–membered lactones, Claisen rearrangement approach to synthesis of obtusenyne, 7171

Natural products
alkaloids from dendrobatid poison frogs, further *cis*–decahydroquinolines and 8–methylindol– izidines 5401
arborane family, synthetic approaches to pentacyclic triterpenes, 7045
natural and unnatural compds with quaternary C–centers via chiral non–racemic bicyclic lactams, Report, 9503
structure detn, one–dimensional proton–carbon correlations, 3521

Naphthalenes
chiral 3,3–dialkyl dihydronaphthalenes, Report, 9503
electro–fluorination in amine–HF, 705
isomeric naphthaldehydes, conformational preferences by NOE experiments, 9125
naphthoquinone and methylnaphthoquinone, homolytic alkylation, enthalpic, steric and polar effects, 7343
naphtho[1,8–*b*,*c*]–1,5–dithiocin–1, 1–dioxide –1,5–dioxide, –1,1,5–trioxide and –1,1,5,5–tetraoxide, crystal and molecular structures and conformations, 5077
naphtho[1,8–*b*,*c*]–1,5–dithiocin and its S–oxides conformation in soln, 5087

Nematodes
nematocidal activity of ophiobolin K and 6–epiophiobolin K from *Aspergillus ustus*, 6931

Nickel and compounds
A1–NiC12.6H2O–THF for selective red– uction of organic functional groups, 8587
hydroxide electrode, oxidation of partially protected carbo–hydrates, 715

Ninhydrin
and analogs, syntheses and applications, Report, 8791

Nitrile oxides
intramolecular 1,3–dipolar cyclo–addition, stereo– selective synthesis of (+)–testosterone, 6635
intramolecular 1,3–dipolar cyclo–addition, synthesis amino inositol derivs as α–glucosidase inhibitors, 7537
intramolecular cycloaddition to 2–furylthiol–and 2–furylmethanethiol derivs, 3869

Nitriles
αβ –γδ–unsaturated–, prep via Wittig– Horner reaction of β–substit cyclo–hex–2–en–1–ones with diethyl cyano– methyl phosphonate, 993

as solvent, directing β–O–glycosidations and formation of nitrilium–nitrile conjugate in synthesis of β–glycosides, 9985
formation via zinc iodide–catalysed opening, bay–region polycyclic aromatic hydrocarbon epoxide by trimethylsilyl cyanide, 1621
pyridazinecarbonitrile deriv, reaction with phenylmagnesium chloride, 8573

Nitrilium salts
reaction with alde– hydes, prep of N–acyliminium salts, 205

Nitro compounds
α–nitroepoxides, nucleophilic ring opening to 1,2– diketones, 8883
1,4–dinitrobenzene, reaction with t–butylmagnesium chloride, substitution or addition, 1091
1–arylsulfonamido–1–methylthio–2–nitroethylenes, synthesis, tautomerism and conversiosn to N–arylsulfonyl nitroacetamides, 3887
2–nitro– and 3–nitro–2–cyclohexenone acetals, prep and formation of highly functionalised intermediates, 2027
3–nitropyrroles, efficient synthesis, 4639
halogenated phenylnitromethanes, reactions with triethyl phosphite, 111
tetranitromethane, reaction with diazo compds and sulfides, oxygen transfer by dissociative electron transfer 3773

Nitrones
1,3–dipolar cycloaddition to sugar enlactones, 10087
cycloaddition to diphenylphosphinoethenes, synthesis of isoxazolidinylphosphines, 9053
from oximes, using bifunctional Michael acceptor–dipolarophile components, 8297
generation from oximes, scope of tandem 1,2–prototropy intramolecular cycloaddition sequence, 4007
generation from oximes. tandem Michael addition–1,3–dipolar cycloaddition, 4477,4495
intramolecular 1,3–dipolar cyclo–addition, synthesis amino inositol derivs as α–glucosidase inhibitors, 7537
prochiral–, cycloaddition with chiral (*S*)–allylic ether, route to (+)–mono– morine I, 9329

Nitrosation
N–dealkylation–N–nitrosation, tert–aromatic amines by n–butyl– nitrite, 7845

Nitroxides
α–nitrocyclopentene oxide, reaction with nucleophiles to give α–substit ketones, 8883
alkyl and aryldithio– pyridine N–oxides, sulfenylation syn–thesis of disulfides, 6127
indoloquinolizidine N–oxides, stereoselective prep, predominant conformations, 2879

Nuclear magnetic resonance
δ–L–α–aminoadipoyl–L–cysteiny l–D–valineenzymatic conversion to isopenicillin N, monocyclic β–lactam involvement, 457
(–)–8–phenylmenthyl 3–amino–2–hydroxy–5–methylh exanoate, 249
1,3–perhydrobenzoxazines and their N– methyl derivs, formation, 2229
1,4,5,7–tetrahydro–3H–2,6–benzo dithionin derivs, 1417
1,4,5,8–tetraazadecalins, structure, conformation and stereo–electronics, 1013
1–(1–deoxy–β–D–psicofuranosyl)t hymine, structural studies, 5847
15',20'–anhydrovinblastine borane complex, 1265
16,16–dimethyl–15–keto–prostagl andin B1 oligomers, structures of dimers, 3999
3'–α–fluoro– and 3'–α–azido–thymidines, 7363
7,8–epoxycembranoid, conformational analysis, 9915
8–amino–, 8–methylamino– and 8–dimethyl–amino–adenosines, N– resonances, 4693
9,10–annelated–1,4,5,8–tetraoxade calins, structure, conformation and stereo– slectronics, multi–disciplinary probe, 5781
9,11–secosterol from *Spongia officinalis*, structure and syn–thesis of 3β,6α–dihydroxy–9–oxo–9,11–seco–5α–cholest–7–en–11–al, 7937
A82775B and A82775C from order *Sphaeropsidales*, structure, *3633*
acrosin, potential inhibitors, 4–acet– amidophenyl esters and 4–acetamido–anilides of L–argin– ine, *p*–guanidino–L–phenylalanine, L–lysine, N^2[D–fructos–3–O–yl and D–glucos–3–O–yl]–acetyl–L–lys ine, 8831
alkaloids from dendro–batid poison frogs, further pumiliotoxins and allopumiliotoxins and reassignment of the keto function in pumiliotoxin 307F, 5415
altemicidin, structure detn, 3621
and CD, 2'–5' and 3'–5' RNA hexamers *AACCUU*, charact–erisation in soln using 2'–t–butylldimethylsilyl protection, 1075
and enzymatic characterisation, 2'–5' and 3'–5' RNA hexamers *AACCUU*, 1075
and molecular mech anics, structure, conformation and stereoelectronics of 1,4,5,8–tetraazadecalins, 1013
and physico–chemical properties of N^2,3– ethenoguanosine and 1A'–metamorphosine, 6689
arrivacins, pseudoguaianolide esters from *Ambrosia psilostachya* with angiotensin II binding activity, 4869
asymmetrically substituted calix–arene, tetraester deriv in cone conformation, 1911
azetidin–2–one ring formation, 7417
barbituric acid and 5,5–diethyl deriv, structure, 7593
benzo[b]thiophenium S,C–ylides, prep, structure and comparison with thiophenium analogues, 8611
bicyclo[4.2.0]octan system, rearrangement to bicyclo–[3.2.1]octan system, 229
branched tetra–, nona–and deca–ribonucleotides, conformation, 6305
bromotyrosine alkloids purealidins B and C from *Psammaplysilla purea*, isolation and structure, 6617
bryostatins 14 and 15, structures, 3601
C19 position in talcarpine and talpinine, NOE experiments, 1383
calyculins E,F,G, and H, inhibition of protein phosphatases, 2999
chorismic acid, enzyme–catalysed conversion to isochorismic acid, 5979
cis and *trans*–2,3–diphenyl–1–oxabicyclo[3.1.0]hexanes, 9629
cis–3,4–bis(2,2,2–trifluoroethyl)py rrolidine, 549
comparative conformational study of tetrameric branched RNA–DNA conjugate and branched–RNA analog, 7135
complete assignment ^1H and ^{13}C NMR, alkali metal salts, salinomycin and narasin, 10109
conformation and stereodynamics, furan–3–aldehyde and corresponding furoyl σ–radical, 6427
conformational analysis, 2–alkyl–1,4–dithianes and related comps, 9455
conformational preferences isomeric naphthaldehydes by NOE experiments, 9125
congeners of cordycepin and related 2'–deoxyadenosine, synthesis, 365

coupling constants of branched RNA tetramer to detn backbone conformation, 3417
cytotoxic peptides, fellutamides A and B, from *Penicillium fellutanum*, 8529
diglucoside interjectin, nyasicoside deriv from *Hypoxis interjecta* and *Hypoxis multiceps*, 6717
dihydroisocoumarin, structure and conformation, 7869
diterpenoid alkaloid delatisine, from *Delphinium elatum*, 9585
diterpenoids, from *Homalanthus acuminatus* and *Chrysobalanus icaco*, HIV inhibition, 4547
diterpenoids, gemmacolides A–F, new chlorinated compds from *Junceella gemmacea*, 3271
diterpenoids, new xenicane and hydroazulenoid, from *Dictyota divaricata*, 1399
epimeric 2,6–di– methyl–4–(N'–substit thioureido)–1,3–dioxanes, prep and crystal structure of *rel*–2*S*,4*S*,6*S*–2,6–dimethyl–4(N'–benzylthioureido)–1,3–diox–ane, 4665
extracellular peptide produced by *Pseudomonas reactans*, structure, 3645
formation of polycyclic oxygen aromatics, mechanism, 5245
furo[2,3–c]pyran–β–D–, conformational A analysis 9675
glycosides from *Tylophora sylvatica*, characterisation, 3545
goniobutenolides and goniofupyrone, isolation from *Goniothalamus giganteus*, 9751
H–bonding in bilirubin dianion, 6163
homonuclear 1D correlation for oligosaccharides, 3535
hoslundin, hoslundal and hoslunddiol from *Hoslundia opposita*, structures, 3555
ilexosides E,F,G,H and I, 18,19–secopursane glycosides from *Ilex crenata*, 7219
indolocarbazole alkaloids Tan–1030 A and Tan –999, structures, 3565
investigation, pseudopteranoids of *Pseudopterogorgia acerosa*, 8679
isotactic polymethoxy–1–alkenes from *Scytonema ocellatum*, structure and synthesis, 4889
lampteroflavin as light emitter in *Lampteromyces japonicus*, synthesis, 6215
logic for structure detn, 3655
marine antibiotic, aplasmomycin, structural study, 3511
molecular structure of 3,3a–dihydrofuro[3,4–*c*]–isoquin oline–1, (4H,9bH)diones, furo[3',4',9,9a]–8,9,16,16a–tetra hydro–1H,3H,11 H–dibenzo–[*a*,*g*]quinolizine–1,11–diones and related compds, 3375
monoterpenoids, five new from *Portieria hornemannii*, 5717
N–1 substituted pyrazoles, structural assignments via NOE difference spectros– copy, 1393
naphtho[1,8–*b*,*c*]–1,5–dithiocin and its S–oxides, conformation in soln, 5087
new lactone antibiotic RP 63834, structure, 61
NOE difference spectroscopy, structural assignments of N–substit 1,2,4–triazoles, 5471
NOE difference spectroscopy, spectral and structural assignments, substit 1,2,3–triazoles, 9783
norditerpenoid alkaloids, delpheline, 8,9–methylene–dioxylappaconitine and dictyzine 4299
o,*o*'–dialkylsubstit benzylidene dichlorides, unusual effects of steric hindrance, 5237
oligonucleotide phosphorodithioate, 1449
P–chloro (bistri– methylsilyl) methylene phosphine, addition of dienes, 71
pent–1'–enopyranosylthiazole derivs via thiazole *C* nucleo–sides, 5549
pentameric and heptameric branched–RNA modelling, lariat structure of group II or nuclear m–RNA introns studied by one– and two–dimensional NMR at 500 MHz, 3183
polypropionate pyrone, cyercenes from autotomizing mollusc *Cyerce cristallina*, 5569
protoliminoid phebaloparvilactone from *Phebalium squamulosum*, structure, 3611
proton and carbon–, okadaic acid, 7437
pyrene carcinogen, nitrile formation via reaction of epoxide ring with tri–methylsilyl cyanide and ZnCl2, 1621
quincyte pigments from fossil quinones in eocene clay, 1095
rearranged aza– dirachtins, characterisation and struct– ure activity relationships, 9231
selective INEPT, one–dimensional proton–carbon correlations, structure detn of natural products, 3521
spectroscopic and database strategies for structure detn of aplysolides A and B and aplyolide A, 3585
stereoselectivity of H–transfer with chiral NADH models, function of configuration and conform– ation, 9369
structure of antifungal agent restricticin from *Penicillium restrictum*, 3915
structure of oxindole alkaloid macroxine–a from *Alstonia macrophylla*, 3129
study, conformational features of cyclododecanone, 8579
study, effect of N–borane coordin–ation on conformational equilibrium of 6–membered heterocycles, 6903
study, N–substit morpholines, effect of exocyclic conjugation on inversion of sat 6–membered ring, 7465
tetracyclic skeleton of ervitsine and its 20–deethylidene–6,16–dihydro analogue, synthesis, 5585
tetrahydrofurans, substit, stereo–selective synthesis, diastereoisomer analysis, 297
tetraiminocyclophane with two biphenyl units in macroring, oligomerisation in soln, 1425
triazolopyridine ylides derived from 2–acylmethyl–triazolopyridinium salts, 5277
tripeptide Boc–L–prolyl–L–propargyl–glycylglycine methyl ester, structure, 3947
triterpenoids, structure of four oligoglycosides from *Anagallis arvensis*, 5215
two *neo*–clerodane diterpenoids with unusual 2,6–dioxa–bicyclo[2.2.1]heptane structural moiety, 3463
vicinal coupling constant/–molecular mechanics, detn of stereochemistry in acyclic polyhydroxy– lated compds tested with alditol peracetates, 4579
xyloccensin I and J, isolation from *Xylocarpus granatum* and *moluccensis*, proposed structures, 8943

Nucleic acids

2'–5' and 3'–5' RNA hexamers *AACCUU*, synthesis via phos–photriester using 2'–t–butyldimethylsilyl protection, 1075
2'–5' and 3'–5' RNA hexamers *AACCUU*, spectroscopic and enzymatic characterisation in soln using 2'–t–butyl–dimethylsilyl protection, 1075
4–acetoxy–7–methoxy–2H–1,4–be nzoxazin–3(4H)–one, alkyl–ating agent, 1837
cyclic branched tetraribonucleoside, synthesis modelling lariat pre–mRNA processing reaction, 9659
DNA binding activity of aciculatin from *Chrysopogon aciculatis*, 1815
DNA cleavage by quinocarcin tetracyclic analogs, 2629

DNA miminal structural reor–ganisation in cross linking of mechlorethamine, cisplatin and mitomycin C, 2475
DNA recombinant techniques, over– production of chorismate mutase/– prephenate dehy–dratase from *Escherichia coli*, 2573
DNA with sulfur at two nonbonding internucleotide valencies, synthesis, 2377
DNA, singly 5'–^{32}P– end–labeled double stranded, generation for binding based on M13 cloning, alkyl– ation properties of DNA, (+)–CC–1065, analogs and duo–carmycins, 2661
DNA, site–specific introduction of convertible nucleoside, 2603
DNA, with stem–loop structure, sequence specific affinity of monoclonal antibodies, 2563
pentameric and heptameric branched–RNA modelling, lariat structure of group II or nuclear m–RNA introns studied by one– and two– dimensional NMR at 500 MHz, 3183
RNA bifunctional cleavage by ribo– nuclease, 2365
RNA cleavage and recognition by Fe–bleomycin, 2463
tetrameric branched RNA–DNA conjugate and branched–RNA analog, synthesis and comparative conformational studies by 500 MHz NMR, 7135
thymidine derivs with phosphate–isoteric methylene acetal linkages, synthesis, 1547
UV induced major mutation, C!T transition at dTpdC sites, photodamaged DNA for cis–syn cyclobutane dimer of dTpdU, 2579

Nucleosides
β–D–nucleosides, function–alisation of 2'– and 3'–carbons via intramolecular cyclization–trapping of carbon by olefins, 2237
1–(1–deoxy–β–D–psicofuranosyl)t hymine, structural studies, 5847
2–aza–2'–deoxyinosine, incorporation into synthetic oligo– nucleotides, 8917
2–deoxy–, prep and prop of 2–deoxy– glycosyl isothio–cyanates, 5797
3'–α–fluoro– and 3'–α–azido–thymidines, structure by NMR and MM2 calcu– lations, 7363
3'–C–ethynylnucleosides of thymine, synthesis, 1727
8–amino–, 8–methylamino– and 8–di– methyl–aminoadenosines, spectroscopic, kinetic and semi–empirical molecular orbital studies, 4693
acyclo–1–deazasthymidine C–nucleosides via 3,5–dichloro–6–methyl–2*H*–1,4–oxazin–2–one , 10065
dideoxynucleoside isosteres, prep anti–HIV dideoxyisosine and dideoxyguanosine, 8949
furo[2,3–c]pyran–β–D–, conformational A analysis and synthesis by radical–cycli–zation, 9675
homochiral acyclo and carboacyclonucleosides via TiC14 vs SnC14–mediated coupling N–6– benzoyladenine and perbenzoylated 2–deoxypyranose, 9993
hypermodified–, N^2,3–ethenoguanosine and 1A'meta– morphosine: ^{15}N NMR and physico–chemical properties, 6689
modified 2',3' uridine derivs from 2',3'– ene–2'–phenylselenonyl uridine by *Michael* addition reactions, 3431
new doubly modified–, congeners of cordycepin and related 2'–deoxyadenosine, synthesis, 365
tetraribonucleoside, cyclic branched, synthesis modelling lariat pre–mRNA processing reaction, 9659
thiazole *C*–, entry to pent–1'–enopyranosyl–thiazole derivs, 5549
thiazole *C*–, synthesis of pyranose analogs of tiazofurin, 5539
thymidine derivs with phosphate–isoteric methylene acetal linkages, synthesis, 1547

Nucleotides
5',8–cyclopurine and 5',6–cyclodihydro–pyrimidine–, via intramolecular radical cyclisation based on aryl telluride radical exchange process, 9383
branched tetra–,nona– and deca–ribo– nucleotides, syn–theses modelling lariat of pre–mRNA processing reactions, 6305
defined peptide– oligonucleotide hybrids containing a nuclear transport signal sequence, prep, 4113
DNA, with stem–loop structure, sequence specific binding of monoclonal antibodies, 2563
guaninecytosine and adenineuracil, association in chloroform quantified by free energy calculations in Monte Carlo simulations, 2491
guanosine derivs, selective binding, solubility titration to detn association constants, 2507
modified 2',3' uridine derivs from 2',3'– ene–2'–phenylselenonyl uridine by Michael addition reactions, 3431
oligodeoxynucleotides synthesis, tethered DNA molecules by the convertible nucleoside approach, 2603
oligonucleotide phosphoro–dithioates, synthesis, 2377
oligonucleotide phosphorodithioate, synthesis, NMR and structure, 1449
oligonucleotides with dAICA using side–reaction of 2–aza–2'–deoxyinosine protected deriv, 8917
oligonucleotides, building block for incorporation of cis–syn dTpdU dimer bu automated solid phase DNA synthesis, 2579
oligoribonucleotides, solid phase synthesis, phosphoramidite approach using 2'–O–1–(2–chloroethoxy)ethyl protection, 8717
polynucleotide recognition and strand scission by Fe–bleomycin, 2463

Olefins see also Alkenes
biomimetic transalkylation via sulfonium salts, 6939
cycloaddition with keteneiminium cations, access to (±)–grandisol, fragranol and related cyclobutane byeproducts, 5133
diaroyl stilbenes via anodic oxidation of diarylacetylenes and diaryldiacetylenes, 799
electrochemical trifluoromethylation, mechanism and product selectivity, 555
inter– or intra– molecular reaction with oximes, tandem Michael addition– 1,3–dipolar cyclo–addition, 4477,4495
intramolecular cyclization, trapping of carbon radicals, functionalisation of 2'– and 3'–carbons in b–D–nucleosides, 2237
p–mentha–1,3,8–triene and structural related *p*–menthadienes, photochemical reactions, 3037
styrene derivs, carboxymethylation to γ–aryl–γ– butyrolactones, 831
trisubstit–,reaction with phenylselenenyl chloride in methanol, 4211
via transition metal catalysed elimination from tert alcohols and acetates, 8155

Oxazines
3,5–dichloro–6–methyl–2*H*–1,4–o xazin–2–one, prep acyclo–1–deazasthymidine C–nucleosides, 10065
chiral spirocyclic (*Z*)–5–arylmethylene–1,3–oxazin e–4,6–diones, new chiral heterodienes, 7271
fused–ring tetra– hydro–1,3–oxazines, ring–chain taut–omerism and 3 to 4–component equi– libria, 4031

morpholines, N– substit, NMR study, effect of exocyclic conjugation on inversion of sat 6–membered ring, 7465

Oxazolidines
15–azayohimban, new ring system, synthesis, 1065
NEPH–derived–, asymmetric hydrogenation 3–methyl–fumaric and maleic ester monoaldehydes, 7357
norephedrine derived–, stereoselective acetylations of silylenolethers, 7925
stereoselective Reformatsky reactions of aldehydes with 3–(2–bromopropionyl)–2–oxazol idone derivs, 2821

Oxazolines
4–alkylidene–5(4H)–oxazolones, reaction with ethyl 3–oxo–4–triphenylphosphoranylidene–b utyrate, 8907
mesoinonic oxazolones, oxidation by oxygen, 5681

Oxetanes
ring responsible for antitumoral activity of taxol, 9823

Oxidation
3–aryl–3,4–dihydroisoquinolinium salts, to 3–arylisoquinolinones, 9253
aerial–, meso–tetrakis(3,5–di–t–butyl–4– hydroxy– phenyl)–porphyrin, radical decay, 7683
alkanes, by H2O2 in pyridine catalyzed Cu complexes, Gif–type reaction, 6561
alkenes, by chiral non–porphyrinic catalyst based on bleomycin–Fe complex, 1191
anodic amide–, annulation, 6– and 7–membered rings onto amines, 583
anodic reactions of anilines and indoles, 737
anodic trimerisation, aromatic orthodiethers, 791
anodic–, δ–alkenyl– amines, stereo– selective synthesis of 4– or 5–substituted 2–benzyl– and 2– benzoylpyrrolidines, 747
anodic–, 1',8'–di– substit *a,c*–biladiene salts, 685
anodic–, 2–picoline, optimisation, 697
anodic–, 4–phenyl– phenols, intra– molecular cyclisation of 2'–olefinic side– chain, effect of olefin substituents on C–C bond formation, 655
anodic–, benzene to *p*–benzoquinone, 841
anodic–, cyclohepta– triene systems, synthesis of non–benzenoid aromatic compds, 593
anodic–, diarylacetyl– enes and diaryldi– acetylenes, synthesis diaroyl–stilbenes and acetylenic α– and γ–diketones, 799
anodic–, isoalkyl ethers in aqueous electrolytes, 725
anodic–, N–acyl and N–alkoxycarbonyl dipeptide esters, key step for chiral heterocyclic building blocks, 563
anodic–, *p*–methyl–benzylsulfonate, ester and nitrile, regio– selective function– alisation of benzylic positions, 3969
anodic–, phenols, natural products synthesis, 635
catalysts, porphyrin with hydrocarbon encapsulated face, synthesis, 8687
catalytic diol electro–, selectivity using polypyridine Ru complex, 851
chemistry of protoberberine alkaloids, synthesis of 7,8–dehydro– berbines, 5841
cleavage, tricyclic pyridone to bicyclic lactam–dione, 9981
during reductive cyclisations using Bu3SnH, 10119
electro–, formation of enamine moiety for prep of 1,4–dihydro–4–oxo–quinoline–3–carboxylic acids, 665
electro–, ketones in MeOH in presence of alkali metal brom–ides, 895
electrochemical–, phenyl substit alkanes and alcohols, role of polymeric mediator structure, 5025
electrochemical–, prep of 4–acetoxy–3–[1–(t–butyldimethylsiloxy) ethyl]– 2–azetidinones, 531
enantioselective–, sulfides to sulfoxides, presence of bovine serum albumin, 8385
indirect electro–, L–cysteic acid and and L–cysteine from L–cystine, 877
lead tetraacetate–, α–oxoketene dithioacetals, 3305
mercuric acetate–, and stereochemical course of modified Polonovski reaction, prep of 2–substit 1,2,3,4,6,7,12,12*b*–octahydroind olo[2,3–*a*]quinol izines, 6371
mesoinonic oxazolones by oxygen, 5681
organo–Si compds, new one carbon homolgation reagents, 615
partially protected carbohydrates at nickel hydroxide electrode, 715
peracid–, products of swertanone, triterpene of *Swertia chirata* 2337
perborate–, organic sulfides, kinetics and mechanism, 8733
peroxidase–mediated–, phenols, anilines, sulfides and thio–benzamides, M.O.– techniques, 7525
phenol–coupling with phosphomolybdic acid on silica gel, regioselective bio– mimetic synthesis of dimeric phenathrene derivs, 8601
photo–, synthetic and mechanistic aspects of 1,3–dienes, Report, 1343
photosensitised–, α–keto enols, prep 2–oxasteroids, 8361
polybromochloride ions, anodic gener– ation, use as con– trolled oxidising agents for ex–cell indirect electro– oxidation of alcohols, 887
putrscine and cadaverine derivs via diamine oxidases, 507
selective anodic–, of camphor, 5463
stereo–and regio– selective–, flavan–3–ol–,4–arylflavan–3–ol–, and biflavanoid derivs with 2,3–dichloro–5,6–dicyano–1,4–benz oquinone, 6705
superoxide–, 1–nitro–pyrene–*cis*–dihydro– diols, 5667

Oximes
aminothiazole–oximetosylates, reaction with thiols, 10045
aryloximes–cyclopentanone rearrangement, synthesis (±)–aplysin, (±)–filiformin and their debromo analogues, 10003
conversion to nitrones using bifunctional Michael acceptor–dipolarophile components, 8297
generation of nitrones, scope of tandem 1,2–prototropy–intramolecular cyclo– addition sequence, 4007
inter– or intra– molecular reaction with alkenes, tandem Michael addition– 1,3–dipolar cyclo–addition, 4477,4495
intramolecular 1,3– dipolar cycloaddition, synthesis amino inositol derivs as α–glucosidase inhibitors, 7537

Oxiranes
alakenyloxiranes, Pd–catalysed hydrogenolysis, prep of (–)–sericomin, 2991
chiral–, ring opening with alcohol cat– alysed organotin phosphate condensates, inversion at tertiary and benzylic centers, 7625

Oxygenation
non–sensitized photo–, steroidal isoxazolidines, 6389
photo–, pteridin–2,4,7–triones, 2979

Ozonolysis
endo–tricyclo[6.2.1.$0^{2,7}$]undec–9–ene–3,6–dione, x–ray analysis of products, 961

Palladium and compoundsz
catalysed carbonylative coupling of 2–hydroxyaryl iodides with ethynl– arenes, regio–chemistry, 6449
catalysed coupling of vinyl triflates with enynes and synthesis of 1a,25–di–hydroxyvitamin D3, 3485
catalysed cross coupling, aryl bromides with (*Z*)–1–ethoxy–2–tributylstannylethene, construction of condensed heteroaromatics, 1877
catalysed reaction of γ–acetylenic malon– ate anions with unsat halide, prep of (*E*)– arylidene and allylidene cyclo– pentanes, 6293
intramolecular catalysed coupling of enol triflate and vinylstannane functions, annulation leading to bicyclic diene systems, 4555
mediated intramolecular acetal formation and prep substrate from D–glucose, synthesis enantiomeric paniculide B, 7259

Penicillins
from isopenicillin N synthase, 5309
isopenicillin N, via enzymatic conversion of δ–L–α–aminoadipoyl–L–cysteinyl–D–val–ine, monocyclic β–lactam involvement, 457

Peptides and polypeptides
acrosin, potential inhibitors, 4–acetamidophenyl esters and 4–acetamidoanilides of L–arginine, *p*–guanid– ino–L–phenylalanine, L–lysine, N^2[D–fructos–3–O–yl and D–glucos–3–O–yl]–acetyl–L–lysine, 8831
alahopcin, stereospecific synthesis, 5835
amino protected–, characterisation and synthesis from amino–α–hydroxyiminophosphonates, 1257
angiotensin II, binding activity of arrivacins, pseudoguaianolide esters from *Ambrosia psilostachya*, 4869
antitumor cyclic hexapeptides, conformation of RA series, 2757
cholecystokinin analog, incorporation of α–CH_2CO_2H functionalized tryptophan, 4763
cytotoxic–, fellutamides A and B, from *Penicillium fellutanum*, 8529
defined peptide– oligonucleotide hybrids containing a nuclear transport signal sequence, prep, 4113
dipeptides and glycoamino acids via anodically produced phenoxenium ions, 645
extracellular–, produced by *Pseudomonas reactans*, structure, 3645
glidobactin–, synthesis of core structure glidobamine, 6251
hexapeptides, antitumor bicyclic RA–VI and –VIII from *Rubia cordi– folia*, conform–ationactivity relationship, 7007
hydroxyethylene dipeptide isosteres as building blocks for enzyme inhibitors, 1887
N–acyl and N– alkoxycarbonyl dipeptide esters, anodic oxidation, key step for chiral heterocyclic building blocks, 563
pepsin catalysis, long range electrostatic effects, 2519
phospha–C–peptides, enzymatic synthesis, 1239
polypeptides, structural requirements for biosynthetic incorporation of non–natural residues, 2389
protected fragments, synthesis and purification using photolabile Nbb– resin, 9867
solid phase synthesis, placement of EDTA at any position via N–a–Boc–N–*–tribenzyl EDTA–L–lysine, 2535
synthesis, azido– methoxybenzyl esters of acids, protection of carboxyl group, 239
synthesis, base labile urethane protecting group from 2,2–bis–(4'–nitrophenyl)ethan–1–ol, 8001
synthesis, prep of acid labile arginine deriv, N^G–2,2,5,7,8–pentamethylchroman–6–sul–phonyl–L–arginine, 6253
tripeptide Boc–L– prolyl–L–propargyl–glycyl–glycine methyl ester, synthesis, properties and crystal structure, 3947

Pepidoglycans
pepidoglycan monomer derivs, synthesis and biological activity, 8407

Peracids
oxidation products of swertanone, triterpene of *Swertia chirata* 2337

Peroxides
arenesulfonyloxy–, addition to olefinic π–systems, Report, 1109
H_2O_2 oxidation of alkanes in pyridine catalyzed Cu com–plexes, Gif–type reaction, 6561
pteridin–2,4,7–triones 6,8–endoperoxide, prep 2979
superoxide oxidation, 1–nitropyrene–*cis*–dihydrodiols, 5667

Pesticides
3–amino–2–halomethyl–, 2–halomethyl– 3–(subst.amino)–and 2–halomethyl–3–hetaryl–quinazolin–4(3H)–ones, 9393
synthesis of (±) heritol, 5759

Pharmacologically active compounds
(+)–leukotriene B4 methyl ester and 5–epimer from (R)–glycidol, 7279
(–)4,8,β–dimethyl testolactone, synthesis from (+)0–15–methyl isoagathate 4375
(*S*)–(+)–ferrulactone, synthesis using TBADH–generated bifunctional chiron, 4631
1–nitropyrene–*cis*–dihydrodiols, superoxide oxidation, 5667
15–azayohimban, new ring system, synthesis, 1065
2',3'–ene–2'–phenylselenonyl uridine, prep of 2',3' modified uridine derivs by Michael addition reactions, 3431
4–acetoxy–7–methoxy–2H–1,4–benzoxazin–3(4H)–one, reaction with phenols, anilines, thiols, heteroarenes, amino acid derivs and nucleic acids, 1837
aciculatin with DNA binding activity from *Chrysopogon aciculatis*, 1815
anticancer drug photofrin–II, regioselective synthesis related ether–linked porphyrin dimers and trimers, 9571
arrivacins, pseudoguaianolide esters from *Ambrosia psilostachya* with angiotensin II binding activity, 4869
benzochlorins, 5,15–diaryl, synthesis and structure, 7853
bryostatins 14 and 15, isolation and struct– ures, 3601
cis–3,4–bis(2,2,2–trifluoroethyl)pyrrolidine, 549
clavulanic acid biosynthesis, isolation of dihydroclavaminic acid intermediate, 4089
conformation–activity relationship, antitumor bicyclic hexapeptides RA–VI and –VIII from *Rubia cordifolia*, 7007
furo[2,3–c]pyran–β–D–nucleosides, con– formational Aanalysis and synthesis by radical–cyclization, 9675
fused–ring tetrahydro–1,3–oxazines, ring–chain tautomerism and 3 to 4–component equilibria, 4031
iminophosphorane–mediated one–pot prep of 7H–pyrido–[4,3–*c*]carbazole and 10H–pyrido[3,4–*b*]carbazole derivs, 4175
interjectin, nyasicoside deriv from *Hypoxis interjecta* and *Hypoxis multiceps*, 6717

pentasaccharide saponins, antitumour non sulphated glycosides from *Holothuria forskalii*, 4753
renin inhibitors possessing hydroxyethylene isostere residue, synthesis from 3,4,6–*tri*–O–acetyl–D–glucal via lactone precursor, 2785
serotonin–3 receptor ligand prototype via kinetically controlled azide displacement on allylic chloride, 5391
sesquiterpene, (±)–(Z)–9–(bromomethylene)–1,5,5–trimethylspiro [5,5]undeca–1,7–dien–3–one, total synthesis, 2155
sodium diethylphosphite–carboxyborane and related compds, synthesis, characterization and antitumor prop, 6915
trifluoromethyl ketones and related fluorinated compds, prep, Report, 3207
triterpenoids, structure of four oligoglycosides from *Anagallis arvensis*, 5215
via SRN1 reaction, imidazo[1,2–*a*]pyridine derivs and 2– nitropropane, 5173
weinbersterol disulfates A and B from *Petrosia weinbergi*, 1185

Phase transfer
chiral catalyst, use in prep of β–hydroxcy–α–amino acids via aldol condensation, 5367
cocatalysis in β–elimination reactions, 2843
PEG–quat catalysts, activity in dehydrohalogenation reactions, 2895
reactions, catalytic activity of cyclophosphazenic polypodands comparison with open–chain analogs, 7477

Phenols
4–phenylphenols, anodic oxidation, intramolecular cyclcisation of 2'–olefinic side–chain, effect of olefin substituents on C–C bond formation, 655
anodic oxidation, natural products synthesis, 635
peroxidase–mediated oxidation, M.O.– techniques, 7525
phenoxenium ions, anodically produced, synthesis of dipeptides and glycoamino acids, 645
resorcinol and phloroglucinol, oxidative coupling with DOPA, adducts with tetrahydro–methanebenzofuro[,2,3–*d*]–azocine skeleton, 6243
selective *ortho*–hydroxylation in Cu complexes, 4429
SRN1 C–arylation with azosulfides, prep dibenzo[b,d]pyran–6–ones, 9297

Pheromones
(±)–grandisol, synthesis via chiral bicyclo[3.2.0]heptenes, 8259
(±)–grandisol, fragranol and related cyclobutane bye–products, access to via cycloaddition of keteneiminium salts with olefins, 5133
(±)–ipsenol and (±)–ipsdienol, synthesis, 2041
(–)–frontalin and (–)–malyngolide via epoxyketone rearrangement, 6967
(–)–serricornin via Pd–catalysed hydrogenolysis of alakenyl–oxiranes, 2991
(–)–sitophilate via yeast–mediated reduction of enol ester, 7237
(3S,5E)–(–)–3,9–dimethyl–6–isopropyledeca–5,8–diene–1–yl acetate, sex phero– mone *d'Aonidiella citrina*, synthesis, 10015
(*S*)–(+)–ferrulactone, synthesis using TBADH–generated bifunctional chiron, 4631
(*S*)–4–hexanolide–, antipode of *Trogoderma glabrum* via (*R*)–tetrahydro– 5–oxo–2–(2–hydroxyethyl)furan, 3089
7–methyl–1,6–dioxaspiro[4,5]decane, rac and chiral isomers, enzymatic syntheses, 1157
all–*trans* acyclic isoprenoid–, synthesis of components, 6533
C19–skipped polyenic–, synthesis, 3347
dihydro–5–octyl–2(3H)–furanone, prep, 7245
ipsdienol, new synthesis of enantio– mers, 2163 2163
Japanese beetle and mosquito oviposition–, microbial syntheses, 1145
lavandulol terpenoid syntheses, regio– and stereocontrol allyl–lithium generation by allyl phenyl thioether lithiation, 9727
optically pure dictyopterenes A anbd C, synthesis via enzymatic hydrolysis of cyclopropanes, 1215
Popilla japonica–, synthesis via lipase–catalyzed kinetic resolution of methyl 4–hydroxy–5–tetradecynoate, 6223
queen bee–, synthesis of (*R*)–(–)–9–hydroxy–(*E*)–decenoic acid, 1611
trienic sex–, stereochemical identification, 7767

Phosphines
allenylphosphines and functional phosphirenes, synthesis, 6673
diphenylphosphinoethenes, cycloaddition to nitrones, synthesis of isoxazolidinylphosphines, 9053
halogenated phosphine dioxides, macrocyclisation with bis (diphenylphosphino)–1,3–propane, 403
isoxazolidinylphosphines by cycloaddition of nitrones to diphenylphosphinoethenes, 9053
P–chloro(bistrimethylsilyl)methylene phosphine, addition of dienes, 71

Phosphinic acid and derivatives
phosphinic amides, reaction with aromatic aldehydes, direct formation of N–phosphinoyl–and N–sulfonyl–imines, 5561

Phosphirenes
functional–, and allenylphosphines, synthesis, 6673
P–mesityl–, reactivity with n–butyllithium, 6673

Phosphites
sodium diethyl– phosphite–carboxyborane and related compds, synthesis, characterization and antitumor prop, 6915
triethyl phosphite, reactions with halogenated phenyl–nitromethanes, 111

Phospholipids
ether glycerophospholipids structurally related to modulator, synthesis, 10023
long chain homologs of TMA–DPH and DPH*p*PC, synthesis of fluorescent probes for localised membrane fluidity measurements, 1459

Phosphonic acid and derivatives
alkylphosphonic and dialkylphosphinic acid esters, enzyme catalysed synthesis of phospha–C–peptides, 1239
amino–α–hydroxyiminophosphonates, characterisation and synthesis of amino protected peptides, 1257
optically active 1–aminoalkyl–phosphonic acids via stereoselective enzymatic hydrolysis of racemic N–acylated 1–aminoalkylphosphonic acids, 3989

Phosphonium salts
acyloxytriphenyphosphonium ions, generation and conversion to esters, amides and β–lactams, 767
E–1,2–bis[triphenyl(trifluoromethanesulfonyloxy) – phospho]–ethylene, $Ph_3PCH=CHPPh_3.2OTf$, reaction with bases, C2–diylide, $Ph_3P=C=C=PPh_3$, formation, 4539

Phosphoramidites
myo–inositol 3,4–bis– and 1,3,4–tris– phosphate, rac 3–methylphosphonate analogs, synthesis, 4709

Phosphoranes
iminophosphorane–mediated one–pot prep of 7H–pyrido–[4,3–*c*]carbazole and 10H–pyrido[3,4–*b*]carbazole derivs, 4175
iminophpsphoranes, reaction with sym– metrical dicarbonyl dichlorides, elimination triphenyl phosphine oxide or dichlorotriphenyl–phosphorane, mech– anisms, 53

Phosphorothioic acid
oligonucleotide phosphorodithioates, synthesis, 2377
oligonucleotide phosphorodithioate, synthesis, NMR and structure, 1449

Phosphorus compounds
trivalent phosphorus acid amides, nature of acid–catalyzed alcoholysis, 9839

Photochemistry
2+2–cycloadditions, diphenylketene and diphenylketen–N–(4–methyl–phenyl)imine to 5–membered heterocyclic 2,3–diones, 3045
addition, benzo– phenone to allenic esters 2211
C–H bond cleavage, metal hydride reduction of 1,2– di–phenyl–2–haloethenes, 9071
dimerisation, 1,3–cyclohexadiene, 3137
excitation of dipyrrinones, results in restricted bond rotation and fluorescence, 3719
induced ring expansion of aryl azides, prep of 3H–azepin–2–ones and 6H–azepino–[2,1–*b*]–quinazolin–12–ones, 2277
intramolecular arene–olefin cycloaddition of substituted 1–(but–3–enyl)indanes, 3059
non–sensitized oxygenation of steroidal isoxazolidines, 6389
oxygenation, pteridin–2,4,7–triones, 2979
photolysis, 3,3'–diamino–2,2'–bi–1,4–naphthoquinonyl, 8373
photolysis, cyclic enol esters with or without electron transfer photosensitiser, 9289
photosensitised oxidation, α–keto enols, prep 2–oxasteroids, 8361
reaction between 1,4–dicyanonaphthalene and benzyl ethers, 5043
reaction of aromatic aldehyde with indole, synthesis of di–indolylmenthanes, 9225
reactions, *p*–mentha– 1,3,8–triene and structural related *p*–menthadienes, 3037
single electron transfer, formation of β–hydroxyketones from αβ–epoxyketones, 7775
UV induced major mutation, C!T transition at dTpdC sites, photodamaged DNA for cis–syn cyclobutane dimer of dTpdU, 2579

Physical properties
monodisperse perfluoro–polyethoxylated amphiphilic compds with two–chain polar head, 411

Phytoalexins
camalexins produced in leaves of *Camelina sativa*, 3909
moracin M from *Morus alba*, transition metal directed synthesis, 7981
prenylated–, from *Morus alba*, transition metal mediated synthesis, 7991

Pigments
bilirubin dianion, intramolecular H–bonding, 6163
dipyrrinone chromophores, long–range exciton coupling, 9759
dipyrrinones, restricted bond rotation and fluorescence following photoexcitation, 3719
quincyte–, fossil quinones in eocene clay, 1095
Ruhemann's purple, mechanism of formation, Report, 8791
visual–, photoisomerization and formation, effect of Me substit in 11–methyl–9–demethyl–and 11–methyl–9,13–didemethyl –retinal, 3711

Piperidines
1–epoxyalkyl–1–deoxynojirimycin s, synthesis and inhibition of exoglucosidases, 2433
2,3–piperidine dione, 3–(2,5–dimethylphenylhydrazon e, Fischer indole cyclisation, synthesis of 8–methyl–5–substituted–1–oxo–β–carbolin e, 1737
2–aryl–4–piperidones, synthesis of tetracyclic skeleton of ervitsine and its 20–deethylidene–6,16–dihydro analogue, 5585
2–phenylsulfonyl–, and –pyrrolidines, prep from N–acylaminals via benzene–sulfinic acid, synthesis of norruspoline and ruspolinone, 1311
4–methylene N–alkyl piperidines, synthesis from prim amines and polyoxymethylene via 2–tri–methylsilylmethyl allyltrimethylsilane, 3981

Plants
African medicinal–, (1*R*,2*S*) absolute configuration of nyasicoside from *Curculigo recurvata* 4369
germination stimulant, stigol derivs modified in position 5, 9793
Gossypium hirsutum, synthesis of (+)–strigol (+)–4'–epistrigol and enantiomers, 1411
growth inhibitors, oxygenated sterols from *Eichhornia crassipes*, 7129
hops, hydrolysis of humulene diepoxide A, 933
phytotoxins from pathogenic fungi, 1649
protection with 3–amino–2–halomethyl–, 2–halomethyl–3–(subst.amino)– and 2–halomethyl–3–hetarylquinazol in–4(3H)–ones, 9393

Polycyclic alicyclic compounds
endo–tricyclo[6.2.1.0^{2,7}]undec–9–ene–3,6–dione, ozonolysis, x–ray analysis of products, 961
pentacyclo[5.4.0.0^{2,6}.0^{3,10}.0^{5,9}]u ndecane–8,11–dione and penta–cyclo[6.4.0.0^{2,7}.0^{3,11}.0^{6,10}]dod ecane–9,12 –dione, effect of hydrate formation on Clemmensen reduction, 9215
perhydrotriquinacenic hosts, synthesis, complexation and transport of tri– podands of C3–symmetry, 5867
polyquinenes, synthesis via Weiss reaction, Report, 3665
triangulanes, synthesis of bismethylene derivs, 5769

Polycyclic aromatic compounds
1–nitropyrene–*cis*–dihydrodiols, superoxide oxidation, 5667
condensed polynuclear aromatic hydro– carbons, synthesis, 2499
dibenzo[a,d]cycloheptenimine 11–substituted derivs via annelation of electro–generated aminium radicals, 757
dimeric phenathrene derivs, biomimetic synthesis, phenol–coupling with phosphomolybdic acid on silica gel, 8601
distal and proximal isomers, 7–vinyl–6b,7,7,8a–tetrahydrocyclobut[a]ace–naph thylen–7–ol, thermal reactions, 7551
phenanthrene and decalin derivs via acid induced rearrangement of βγ–unsaturated ketones, 2081
phenanthroline, electro–fluorination in amine–HF, 705
prismanes, 1,4–bishomo–[6]–prismane via norborneno–benzoquinone, 7807
prismanes, route to [7]–prismanehomo– and secologues, 7821

prismanes, sec–[16]– prismanes, synthesis via 4+2–cyclo–addition of singlet oxygen, boron– mediated fragment–ation and intra– molecular 2+2–photocycloaddition, 7783
tricyclic keto–diols, stereocontrolled synthesis by annulation of 2–cyclohexen–1–one, 5491

Polycyclic hetero– cyclic compds
β–carboline segment manzamine C, synthesis, 8067
π–donor–π–aceptor heterocycles via *Westphal* condensation, 7329
1,2,3,4,6,7,12,12*b*–octahydroindol o[2,3–*a*]quinoli zines, 2–substit, prep, stereochemical course of modified Polonovski reaction and mercuric acetate oxidation, 6371
1,4,5,7–tetrahydro–3H–2,6–benzo dithionin derivs, conformation, 1417
1,4,5,8–tetraazadecalins, structure, conform– ation and stereo–electronics, NMR and molecular mechanics studies, 1013
1–azatriptycene and dervs, prep, 183
15–azayohimban, new ring system, synthesis, 1065
1H–4,4a,5,9b–tetrahydroindeno[1, 2–*b*]pyridines synthesis and isomerization, 7429
2,3,8,8a–tetrahydro–7H–oxazolo[3 ,2–a]pyridines, new hetero–cyclic system, 6503
2–[(2*S*)–2–pyrrolidinyl]pyridine catlyst, enantioselective addition diethylzinc to aldehydes, 8251
2H,4H and 9bH–furo[3,2–c]benzopyrans via intramolecular cycloaddition of carbonyl ylide to an acetylene, 7713
3',3':N,N–bi[3–amino–2,2'–bi01,4 –naphthoquinonyl]prep, 8373
3,3a–dihydrofuro[3,4–c]–isoquinoline–1, (4H,9bH)diones, furo[3',4',9,9a]–8,9,16,16a–tetra hydro– 1H,3H,11 H–di–benzo[*a*,*g*]quinolizine–1,11–diones and related compds, molecular structure, 3375
5–pyrido–1,4–benzodiazepin–4–on es, synthesis and properties of catalytic Rh–complexes with dinitrogen ligands, 5295
6H–pyrido[4,3–*b*]carbazoles, C–11 subst,, synthesis, 6539
7H–pyrido[4,3–*c*]carbazole and 10H–pyrido[3,4–*b*]carbazole derivs, iminophosphor–ane–mediated one–pot prep, 4175
8–methyl–5–substit–1–oxo–β–car boline, Fischer indole synthesis, 1737
9,10–annelated–1,4,5,8–tetraoxade calins, structure, conform– ation and stereoslectronics, multi–disciplinary probe, 5781
anodic coupling, pyridopyrimidine derivs, C–O bond formation, 675
azacycles, medium ring, synthesis, Report, 9131
azolo– and –azino– pyridazines, cycloaddition to diazoalkanes, 2925
carcinogen linked to guanosine moiety, prep and aryl–amidation of guanine ring, 5725
chiral and non–chiral pyrrolo[2,3–b]pyridine derivs, broadening scope of NADH models, 429
congeners of cordycepin and related 2'–deoxyadenosine, synthesis, 365
dibenzocyclooctadiene system and phyl– tetralin via oxidative coupling phylllanthin and halo derivs with TTFA, DDQ, Li/–THF, 8277
dibenzo[b,d]pyran–6–ones, via SRN1 C–arylation of phenols with azosulfides, 9297
dipyrrinone esters, synthesis using carbodiimide reagents, 1945
DOPA, oxidative coupling with resorcinol and phloroglucinol, adducts with tetrahydro–methane–benzofuro[,2,3–*d*]azoci ne skeleton, 6243
indoloquinolizidine N–oxides, stereoselective prep, predominant conformations, 2879
indolo[2,3–a]carbazole N–glycosides, tjipanazoles from *Tolypothrix tjipanasensis*, 7739
mesoionic compds derived from [1,3,4]– thiadiazolo]2,3–*c*]– and [1,3,4]thiadiazolo[3,2–*d*]–[1,2,4]triazines, prep via iminophosphorane–mediated regioselective annelation of 1,3,4– thiadiazole ring into 1,2,4–triazine ring, 6747
N–benzoylindole–2,3–quinodimet hane, Diels–Alder reactivity, application for synthesis of [b]annellated indoles, 1925
N–ethoxycarbonyl–2–azatricyclo[4 .3.1.0^{3,7}]dec–8–enes, synthesis and rearrangement, 8499
paspalicine study, synthesis of 3',4',–7',7'a,9',10'.11',–11'a–octahydro–4',4',7'a–trimethylspiro[1,3–dio xolane]–2,8'(6'*H*)–2'*H*–3',5'a––epoxynaphth–[2,1–*b*]–oxepin–2' –one, 6407
organized polyaza cavity molecules, synthesis and properties, Report, 6851
polyaza binucleating macrocyclic and macrobicyclic ligands, dioxygen affinities of Co–complexes, 6895
polycyclic oxygen aromatics, mechanism of formation, 5245
pyrazolo[4,3–*c*)– and pyrazolo[3,4–*c*]–pyridine derivs via pyrido annelation by tandem Wittig/elctrocyclic ring–closure, 6737
pyrene carcinogen, nitrile formation via reaction of epoxide ring with tri–methylsilyl cyanide and ZnCl2, 1621
pyridazino[4,5–*d*]pyridazines, synthesis of phthalazine derivs, 3959
pyrimido[2,1–b]thiazin–6–one by retro Diels–Alder reaction, 7673
pyrrolo[2,3–d]carbazole system, enantio– merically pure, synthesis, 4255
tetrahydropyrido– and tetrahydroazepino–[1,2–*a*]indole s via Dieckmann/ring expansion, 4645
tilivalline and analogs, stereoselective synthesis, 5051

Polyketides
acyclic and cyclic C–15 acetogenins from *Laurencia pinnatifida*, reassign– ment abs config for E and Z pinna tifidienyne, 9411
cytotoxic bis–tetrahydrofuranic γ–lactone aceto– genins, molvizarin and motrillin from *Annona cherimolia*, 8195

Polymerisation
anodic trimerisation, aromatic ortho– diethers, 791

Polymer support
oligoribonucleotides via phosphoramidite approach using 2'–O–1–(2–chloroethoxy)ethyl protection, 8717

Polymers
organized polyaza cavity molecules, synthesis and properties, Report, 6851
polymeric mediator structure, role in electrochemical oxidation of phenyl substit alkanes and alcohols, 5025

Polyols
polyhydroxylated compds tested with alditol peracetates, detn of stereochemistry by vicinal coupling constant/molecular mechanics, 4579

Porphyrins see also Chlorins
anodic oxidation, 1',8'–di–substituted *a,c*–biladiene salts, 685
bis–porphyrins with a 2,9–diphenyl–1,10–phenanthroli ne spacer, synthesis, 5123
ether–linked dimers and trimers related to photofrin–II, regio–selective synthesis, 9571

meso–tetrakis(3,5–di–t–butyl–4–h ydroxyphenyl)–, aerial oxidation, decay of radical formed, 7683
octa–alkylporphyrins, functionalization of alkyl substits, reactions, 6887
uroporphyrinogen III synthase, mechanism of action, molecular biology and biochemistry, 6003
with hydrocarbon encapsulated face, synthesis, 8687
zinc octamethyl–diphenylporphyrin, inclusion, com– plexation and X–ray crystal structure, 2401

Potassium and compounds
ion–selective electrodes, synthesis of bis(benzocrown ether)s with polymethylene bridges, 4101
potassium 2,4–pentanedionate, arylation via SRN1 reaction with diazosulfides, 333
superoxide oxidation, 1–nitropyrene–*cis*–dihydrodiols, 5667

Pressure reactions
high–, methods, role in organic chemistry, Report, 8463

Prostaglandins
16,16–dimethyl–15–keto–prostagl andin B1 oligomers, structures of dimers, 3999
isocarbocyclin via SN2 alkylation of bicyclic allylic esters with Zn–Cu reagents, 1861

Protecting groups
"benzostabases", for amino groups, 9807
1–benzoyloxy–2–t–butyldimethyls ilyoxy–4–methoxy–1,3–butadiene, cyclo– addition with N,O– protected–D–threoninals and D–allo–threoninals, 1045
2'–5' and 3'–5' RNA hexamers *AACCUU*, CD and NMR characterisation in soln using 2'–t–butykldimethylsilyl protection, 1075
2'–O–1–(2–chloroethoxy)ethyl–, solid phase synthesis oligoribo–nucleotides, 8717
azidomethoxybenzyl esters of acids, protection of carboxyl group in peptide synthesis, 239
base labile urethane–, from 2,2–bis– (4'–nitro–phenyl)–ethan–1–ol, synthesis of peptides, 8001
N,N–diethylcarbamoylindole–, effect on synthesis and reactivity of 2–(1,3–dithian–2–yl)indoles, 7911
N,O–protected–D–threoninals and D–allo–threoninals with 1–benzoyloxy–2–t–butyldimethy lsilyoxy–4–methoxy –1,3–butadiene, 1045
N–, effect on [4+2]cycloaddition of activated dienes to α–amino aldehydes, 1053
N–groups, effect on stereochemistry of [4+2] cycloaddition of activated dienes to α–amino aldehydes, 1053
trifluoroacetic acid labile–, for guanidine side–chain function of arginine, prep of N^G–2,2,5,7,8–pentamethylchro man–6–sulphonyl–L–arginine, 6253

Proteins
4–acetoxy–7–methoxy–2H–1,4–be nzoxazin–3(4H)–one, alkyl–ating agent, 1837
affinity cleavage by peptide ligands, 2535
biosynthetic factories, review, 2543
uteroglobin, protected peptide fragments, synthesis and purification using photolabile Nbb–resin, 9867

Protonation
and alkylation, chiral Schiff bases, diastereoselectivity of reactants, 4611

Prototrophy,
tandem 1,2–prototropy intramolecular cycloaddition sequence of aryl and aliphatic oximes, effect of steric and electronic factors, 4007

Pteridines
2,4–diaminodihydrohomopteridine , synthesis of 6–acetyl–2,4–diamino–7,8–dihydro–9*H*–p yrimido[4,5–*b*][1,4]diazepine using furazano[3,4–*d*]–pyrimidine precursor, 5259
pseudopteranoids of *Pseudopterogorgia acerosa*, NMR investigation, 8679
pteridin–2,4,7–triones, photooxygenation, 2979

Purines
congeners of cordycepin and related 2'–deoxyadenosine, synthesis, 365
dehydro–4–iminoallantoin and covalent adducts, synthesis and structure, 317
N–6–benzoyladenine and perbenzoylated 2–deoxypyranose, TiC14 vs SnC14–mediated coupling, application synthesis homochiral acyclo and carboacyclo–nucleosides, 9993
purine–pyrimidines base pair, selective intracomplex reaction of pendant groups, 10095
ribonucleotides, de novo biosynthesis, 8917

Pyranones
tetrahydropyran–2–ones, chromatographic resolution, 9939

Pyrans
tetrahydropyrans via intramolecular reactions of allyloxy radicals, 8417

Pyrazines
2(1H)pyrazinone cycloadducts with ethene, reduction to 2,5–diazabicyclo[2.2.2]–octan–3 –ones, 9269

Pyrazoles
N–1 substit–, spectral and structural assignments via NOE difference spectros– copy, 1393

Pyridazines
condensed–, synthesis of phthalazine derivs from pyridazino[4,5–*d*]pyridazines 3959
monocyclic–, cyclo– addition to diazoalkanes, 2925
pyridazinecarbonitrile deriv, reaction with phenylmagnesium chloride, 8573

Pyridines
2,3,4–trisubstit–, via transformation of picolinic and isonicotinic acids, 1697
2–picoline, anodic oxidation, 697
coranands, synthesis and conformation, 1977
substit–, intramolecular cyclo–additions, synthesis of azatricycles, 8499

Pyridinium salts
pyridinium rings, intramolecular free–radical substitution, 4077

Pyridones
5,6–dihydro–3,5–dihydroxy–4H–p yridones – new Maillard products, reaction of 6–O–substit hexoses with prim amines, 9351
tricyclic–, oxidative cleavage to bicyclic lactam–dione, 9981

Pyrimidines
2–(2–ethynylphenyl–X–)pyrimidin es, reactivity in intra– molecular Diels–Alder reactions, computational study, 1753
barbituric acid and 5,5–diethyl deriv, structure, NMR, 7593
purine–pyrimidines base pair, selective intracomplex reaction of pendant groups, 10095

Pyrimidinium salts
5–uracilylmethylenepyridinium salts, reduction by thiols, model in step of thymidylate synthase reduction, 4361

Pyrones
polypropionate–, cyercenes from autotomizing mollusc *Cyerce cristallina*, 5569

Pyrroles
3–nitropyrroles, efficient synthesis, 4639
4–cyan0–2,3–diphenyl=2H–pyrrol –5–thione, synthesis and reactions, 8243
tetrapyrrole products via anodic oxidation of 1',8'–disubstituted *a,c*–biladiene salts, 685

Pyrrolidines
2–benzyl– and 2–benzoylpyrrolidines, 4– or 5–subst, via anodic oxidation of δ–alkenylamines, 747
2–phenylsulfonyl–, and –piperidines prep from N–acylaminals via benzenesulfinic acid, synthesis of norrrruspoline and ruspolinone, 1311
chiral 2–substit–, via bicyclic lactams, Report, 9503
cis–3,4–bis–(2,2,2–trifluoroethyl)– pyrrolidine, electrochemical synthesis, 549
enantiomerically pure bicyclic pyrrolidin deriv via decarboxyl– ation of (1*S*,3*S*,5*S*)– 2–aza–bicyclo[3.3.0]octane–3–c arboxylic acid, 1205
functionalised–, via cyclisation of N–tosyl oxiranepropylamines, 3075
NH pyrrolidines, 2,3 or 4–alkyl substit, synthesis via use of β–amino–alcohol–N–oxide derivs, 5161
trans–2,5–disubstit–, via stereoselective addition, organo–Cu reagents to N–acyl– iminium ions, 573

Pyrrolines
mirabimides A–D, new N–acylpyrrolinones from *Scytonema mirabile* 2087

Pyrrolizidines
(1*S*,2*R*, 6*R*,7*S*)– 1,2,6,7–tetrahydroxy pyrollizidine, synthesis and effect on glycosidases, 131
necine base platynecine, synthesis from glucose, 525
pyrrolizidine amino acid with carboxylic group at C–3, isolation of 7A–epialexaflorine from *Alexa grandiflora*, 5637

Pyrylium
coranands,? synthesis and conformation, 1977
perchlorates, polarographic reduction, 1957

Quinazolines
3–amino–2–halomethyl–, 2–halo– methyl–3–(subst.amino)– and 2–halo–methyl–3–hetaryl– quinazolin–4(3H)–ones, plant protection, 9393
ring, synthesis by tandem aza–Wittig reaction/electrocyclic ring closure, 5819

Quinolines
1,4–dihydro–4–oxo–quinoline–3–c arboxylic acids via electro– oxidative formation of enamine moiety, 665

Quinones
2,3–dichloro–5,6–dicyano–1,4–be nzoquinone, stereo–and regioselective oxidation of biflavanoid derivs, flavan–3–ols, and 4–arylflavan–3–ols, 6705
6–ethyljuglone, natural derivs, synthesis, 4287
chiral 2–*p*–tolyl– sulfinylquinones, synthesis, 605
fossil–, in eocene clay, quincyte pigments, 1095
N–acyl–*o*–quinone monoimide, as diene or dienophile, Diels– Alder reactions, solvent effect result of frontier molecular orbital interaction, 5857
nucleophilic reactions, Report, 8043
p–benzoquinone, duet electrosynthesis from benzene, 841
pigments, quincyte from fossil eocene clay, 1095

Racemisation
acid–catalysed–, catecholamines, mechanism, 5019

Radicals and radical reactions
1–hexenyl–, cyclisation, effect of carbonyl group, 9463
6–methylenecyclodecyl–, ring closure, 121
alkoxyl–, β–scission, prep γ–substit γ–lactones and δ–substit δ–lactones, 7245
alkoxyl–, generated from 1–ethylbenzo– cyclo–buten–1–ols and from 1,3–di– hydroisobenzo– furan–1–ols, synthesis of phthalides via single or double β–scission, 5437
alkyl–, homolytic alkylation naphthoquinone and methyl– naphthoquinone, enthalpic, steric and polar effects, 7343
allyloxy–, intramolecular reaction, 6–centered transition states, regio– and stereo–chemistry, 8417
aminium–, electro–generated, cyclisation to 11–substituted dibenzo[a,d]cycloheptenimine derivs, 757
aromatic version of radical nucleophile displacement reactions, reconsideration of mechanism, 6577
carbon–, intramolecular cyclization–trapping by olefins, functionalisation of 2'– and 3'–carbons in b–D– nucleosides, 2237
chain processes, carbocyclic ring expansion, 6795
chain processes, intramolecular SH2' macrocyclisations, 5901
cyclization reaction of 1,6–dienes with allylsulfones, 5425
difluoroalkyl–, intramolecular trapping by tethered olefins, asymmetric synthesis 2,4–disubstit–3,3–difluorotetrah ydrofurans, 9439
free–, highly congested β–diketones via reaction of copper β–diketonates, 8031
free–, ring–expansion leading to 6– and 7–membered hetero– cycles, 4847
furoyl σ–, corresponding to furan–3– aldehyde, conform– ation and stereodynamics, 6427
intramolecular cyclisation based on aryl telluride radical exchange process, synthesis 5',8– cyclopurine and 5',6–cyclodihydropyrimidine nucleosides, 9383
prim, sec and tert alkyl–, and in alkanes, stabilization effects, 6777
radical decay in aerial oxidation of meso– tetrakis(3,5–di–t–butyl–4–hydro xyphenyl)porphyrin, 7683
radical pathways, reaction of mono–substit hydrazones with benzeneselenic anhydride, 1823
radical–chain deoxygenation, prim alcohols, 8969
radical–cyclization, synthesis furo– [2,3–c]pyran–β–D–nucleosides, 9675
tandem–, cyclisation, Mn–based, formation, 7–and 8–membered rings, 8663

Reagents
A1–NiC12.6H2O–THF for selective reduction of organic functional groups, 8587
bifunctional–, for photoaffinity labelling, synthesis of 1,3,5–trisubstit aryl diazirine, 5603
diasteromerically and optical pure sulfinyl–acetates, use in asymmetric SPAC reaction, 6601
ethyl phenylsulfinyl fluoroacetate–, for prep of α–fluoro– αβ–unsat carboxylic acid esters, 4905
fluorination agents, combination of HF with organic bases, Report, 5329
grignard–, addition αβ–unsat esters, prep alkylsilylketene acetals, 8331

Grignard–, and alkyl tosylates, Cu–catalyzed coupling, prep of 1,ω–difunctional hydrocarbon chains, 'two–fold reaction', 6287
one carbon homol– gation–, based on β–Si effect for electron transfer and stabilisation of α–carbanions, 615
organo–Cu–, stereo– selective addition to N–acyliminium ions, prep of *trans*–2,5– disubst pyrrolidines, 573
phenylmagnesium chloride, reaction with pyridazine–carbonitrile deriv, 8573
phosphomolybdic acid on silica gel, phenol– coupling, biomimetic synthesis of dimeric phenathrene derivs, 8601
polybromochloride ions as controlled oxidising agents, ex–cell indirect electro–oxidation of alcohols, 887
PyBOP and PyBroP compared with BOP and BroP, in coupling of αα–dialkyl amino acid, 259
sodium bis(2–methoxyethoxy)(1,1,1,3,3,3–hexafluoro–2–propoxy)aluminum hydride, stereoselective reducing agent in a carbacyclin synthesis, 2773
trialkylstannylmethyllithium, reaction with αβ–epoxy–, and α–chloro ketones, 3281
Zn–Cu–, SN2 alkylation of bicyclic allylic esters, synthesis of isocarbocyclin, 1861

Rearrangements
1–chloro–9–hydroxybicyclo[3.3.1]nonanes, prep *cis*–bicyclo–[3.3.0]octane–1–carbonyl derivs, 9097
2,3–epoxycyclohexanones, route to (–)– frontalin and (–)–malyngolide, 6967
acid induced–, βγ–unsaturated ketones 2081
adduct, cycloaddition nitroso–halogenobenzenes to cyclopentadiene, to epoxy–epimino– and γδ–epiminopentadienal derivs via N–O and C–C bond breaking, 8323
benzilic acid–, physalin A to neophysalin. structural revision, 2103
bicyclo[3.2.1]heptane moiety of 12,17–bifunctionalised *ent*–beyer–15–enes, 9103
bicyclo[4.2.0]octan system, to bicyclo[3.2.1]octan system, mechanism, 229
Boulton–Katritzky–, 1,2–alkylenedioxy–nitrobenzofuroxans, effect of heterocyclic side ring, 7157
Claisen–, isoprenoid chain elongations using acetals as precursors of vinyl ethers, 6521
Claisen–, unsaturated 9–membered lactones, approach to synthesis of obtusenyne, 7171
cyclopentanone–aryloximes, synthesis (±)–aplysin, (±)–filiformin and their debromo analogs, 10003
hexahydro–(1H)–2–benzazoniniu m ylides to amines in liquid ammonia, 47
Lewis acid catalysed–, 7,11–epoxyisogermacrone, formation of new carbon skeleton, 6399
mechanisms of 1,3–dithiolane sulfoxides, 8091
molecular–, Friedel–Crafts reaction of ethene with acid chlorides, 4991
N–arylsulfonyl amidines, synthesis of enamines, β–aminosulfonyl–enamines and 4H– thiazete–S,S–dioxides, 1937
N–ethoxycarbonyl–2–azatricyclo[4.3.1.0 3,7]dec–8–enes, 8499
organo–Al catalyzed–, epoxides, route to optically active β–siloxy aldehydes, 6983
P–450–dependent oxidative–, in isoflavone bioynthesis, reconstitution of P–450 and NAPH– :P–450 reductase, 5969
photoinduced–, vinyl–cyclopropane–cyclopentene, for chiral bicyclo[3.2.0]heptenes, syntheses (±)–grandisol and (–)–Δ9(12)–capnellene and antipode, 8259
thio–Claisen–, (*Z*)–α–hydroxy–ketene–dithioacetals to α–allylic–β–hydroxydithioesters, stereocontrol of two chiral centers, 6275
unexpected–, 4– bromo–2(2*H*)–benzothiazolones, 2255
via zwitterionic intermediates, hexafluoroisopropanol as solvent, 6725
[2,3]–sigmatropic–, substituted propargyl N,N–dialkylamidosulfoxylates. 3353
[2,3]–sigmatropic–, substituted allylic N,N–dialkylamidosulfoxylates, mol structure of [(1')*S**, (S)*S**]–2'*E*)–4–[[3'–(4"–bromophenyl)–1'–methyl–2 '–propenyl]–sulfiyl]–morpholine, 6655
[3.3]–sigmatropic–, angularly alkylated 2–carbethoxy–tricyclo [5.2.10 2,6]–decadienones, 1495

Receptors
androgen–, affinity for steroidal methyl– sulfonylthiophene and methylsulfonyl– furans, 5099
perhydrotriquinacenic hosts, synthesis, complexation and transport of tripodands of C3–symmetry, 5867
serotonin–3–, ligand prototype via kinetically controlled azide displacement on allylic chloride, 5391
synthetic–, guanosine derivs, introduction and evaluation using solubility titration, 2507

Reduction see also Hydrogenation
(*R*)–1 and (*S*)–2–β–amido ketones giving amido alcohols with like or unlike configuration, 1895
2–oxo acids with *Proteus vulgaris* and hydrogen gas and/or formate, prep polyfunctional (*R*)–hydroxycarboxylic acids, 9019
4–carboxyglutamic and 4–carb–ethoxy–4–fluoroglutamic acids, prep of 5,5'–dihydroxyleucine and 4–fluoroderiv, 1001
5–uracilylmethylenepyridinium salts by thiols, model in step of thymidylate synthase reduction, 4361
baker's yeast–, α–halo–acetophenones 2073
baker's yeast–, 1,3–dioxin–4–ones with chiral oxoalkyl groups at 6–position to alcohols, EPC synthesis, 6197
baker's yeast–, aryl–alkyl and arylalkenyl γ–and δ–keto acids, 7887
baker's yeast–, enantiomeric 4–acyl butanolides, 9247
chelation and non–chelation controlled–, α–methoxy α–phenylthio ketones, 3853
Clemmensen–, pentacyclo[5.4.0.0 2,6.0 3,10.0 5,9]–undecane– 8,11–dione and pentacyclo–[6.4.0.0 2,7.0 3,11.0 6,10]dodecane–9,1 2 –dione, effect of hydrate formation, 9215
electrophilic–, α–chlorimines, synthesis of β–chloroamines, 3407
enantioselective–, acetophenone and anti–acetophenone oxime methyl ether with borane, use of 1,2– and 1,3–amino alcohols, 4941
hydride–, chiral cyclic β–iminosulfoxides, 10035

LAH–, propargyl alcohol of 3–*C*–ethynyl–1,2,5,6–di–*O*–isopropylidene–α–D–allofuranose derivs, effect of intra– molecular oxygens, 6975
microbial–, N–allyl–hydroxylamines to N–allylamines using *Clostridia*, 3329
NADH models, broadening scope with chiral and non–chiral pyrrolo[2,3–b]pyridine derivs, 429
organic functional groups via dissolving bimetals, 441
photoreduction 1,1–diphenyl–2–haloethenes by metal hydrides, 9071
polarographic–, pyrylium perchlorates, 1957
selective–, organic functional groups by A1–NiC12.6H2O–THF, 8587
sodium borohydride–, stereospecific, of cage diketones, 6571
yeast–mediated–, enol ester, synthesis of (–)–sitophilate, 7237

Regiochemistry
and stereochemistry, coupling phenylsulphenyl–, phenylsulphinyl– and phenylsulphonyl– pentadienyl metals, 7489
LAH reduction, propargyl alcohol of 3–*C*–ethynyl–1,2,5,6–di–*O*–isopropylidene–α–D–allofuranose derivs, effect of intramolecular oxygens, 6975

Regiocontrol
and stereocontrol, allyllithium gener– ation via allylphenyl thioether lithiation, lavandulol terpenoid syntheses, 9727
and stereocontrol, intramolecular nitrile oxide cycloaddition to 2–furylthiol– and 2–furylmethanethiol derivs, 3869
C=C bond in Rh2– (OAc)4 mediated C–H insertion of α–diazo–ketones, 7403

Regioselection
γ–lactones, γ–substit and δ–substit δ–lactones via β–scission alkoxyl radicals from transannular hemiacetals, 7245
1–oxa–2,3–cyclohexadiene, formation of [4+2] and [2+2] adducts with dienes or olefins, 4603
3,6–dimethoxy–3,6–dimethyl–cyclohexa–1,4–diene α–arylation of ketones via silyl enol ethers, 9119
and stereoselective hydroboration, route to precursors of ecdysteroids, 7059
and stereoselective oxidation of flavan–3–ol–,4–arylflavan–3–ol–, and biflavanoid derivs with 2,3–dichloro–5,6–dicyano–1,4–benzoquinone, 6705
and stereospecific substitution, unsymmetrical 1,2–diols using 1,3,2λ5–dioxaphospholane, 1603
C–acylation of 2(3H)–benzoxazolones, 6649
control, effect of cations on reactions of 3,3–dichloroallyl metals with subst benzaldehydes, 1485
conversion, thiiranes to alkoxy and acetoxy disulphides and dithianes with Ce based oxidants, 149
functionalisation of benzylic positions in anodic oxidation of *p*–methylbenzylsulfonate, ester and nitrile, 3969
iminophosphorane–mediated annelation of 1,3,4–thiadiazole ring into 1,2,4–triazine ring, prep of meso– ionic compds derived from [1,3,4]thiadiazolo]2,3–c]– and [1,3,4]thiadiazolo[3,2–*d*][1,2,4]triazines, 6747
isocarbocyclin via SN2 alkylation of bicyclic allylic esters with Zn–Cu reagents, 1861
lithium, sodium and potassium chloroallyl systems, theoretical and experimental study, 8739
synthesis of ether– linked porphyrin dimers and trimers related to photo– frin–II, 9571
synthesis, A–ring halogenated derivs of 17a–ethynyloestradiol, 2871

Regiospecificity
α–substitution of crotonic esters. synthesis of natural derivs of 6–ethyl– juglone 4287
branched tetra–, nona–and deca–ribonucleotides, syntheses modelling lariat of pre–mRNA processing reactions, 6305
furan–2–(5*H*)–ones, 5–substit, via reaction of enaminofuranone anions with electrophiles 3171
para–hydroxylation of aromatic carbamates by *Beauveria sulfurescens*, 1447
Pd catalysed cyclisation, synthesis bridged–ring carbo– and hetero–cycles, 9703
trimethylsilyl azide, ring opening of epoxides in presence of aluminium and titanium isopropoxide, 1435

Resins
(–)–α– and (–)–β– phellandrenes, biosynthesis, 5933
photolabile Nbb–, synthesis and purification protected peptide fragments, 9867

Resolution
branched and unbranched 2–alkanols using porcine pancreatic lipase, 1611
chromatographic–, tetrahydropyran–2–ones, 9939
enzymatic–, norbor(ne)nylmethanols in organic media, application to synthesis of (+)– and (–)–*endo*–norbornene lactone, 5513
kinetic–, and carbamate–directed hydrogenation, N–protected α–(α–aminoalkyl)acrylates, 8869
lipase–catalyzed kinetic–, methyl 4–hydroxy–5–tetradecynoate, synthesis of Japanese beetle pheromone, 6223
optical–, rac 2–hexyl–3–hydroxy–4–pentanolide (NFX–2), 6623
optically active compds, large scale perspective, Report, 4789
PPl–catalyzed–, 1,2– and 1,3–diols in methyl propionate, tandem use of enzymes, 7409
sec alcohols by enzyme–catalysed tranesterification in alkyl carboxylates as solvents, 7645

Retinoids
11–methyl–9–demethyl–and 11–methyl–9,13–di–demethyl–retinal. effect of Me substitut on polyene conformation, photo–isomerization and formation of visual pigments, 3711
fluorinated retenoid, synthesis, 1629

Rhodium and compounds
carbenes, cyclo– propanation, C–H bond insertion, heteroatom–H bond insertion ylide formation and subsequent reactions, Report, 1765
catalytic complexes with dinitrogen ligands derived from 5–pyrido–1,4–benzodiazepin–4–ones, synthesis and properties, 5295
Rh with chiral ligands, cyclopentanone derivs via asymmetric cyclisation of substit 4–pentenals, 4879
Rh2(OAc)4 mediated C–H insertion of α–diazo–ketones, regiocontrol C=C bond, 7403

Ring transformations
carbocyclic ring expansion via radical chain processes, 6795
Dieckmann/ring expansion to tetra– hydropyrido–and tetrahydroazepino–[1,2–*a*]indoles, 4645
difference in ring opening and closure, two lactone form– ation from 1,3– dioxin–4–ones having hydroxyalkyl group at 6–position, 5689

expansion, oxidative cleavage tricyclic pyridone to bicyclic lactam–dione, 9981
free radical ring– expansion leading to 6– and 7–membered heterocycles, 4847
photo–induced ring expansion of aryl azides, prep of 3H–azepin–2–ones and 6H–azep[ino[2,1–*b*]–quinazolin–12–ones, 2277
transformations using ethylene glycol/BF3, 8523

Rotation
restricted bond–, and fluorescence in dipyrrinones following photo–excitation, 3719

Rubidium and compounds
ion–selective electr– odes, synthesis of bis(benzocrown ether)s with polymethylene bridges, 4101

Ruthenium and compounds
polypyridine Ru complex, selectivity in catalytic diol electro–oxidation, 851
Ru dioxide in fluoro acid medium, biaryl oxidative coupling, synthesis of non phenolic bisbenzocyclooctadiene lignan lactones, 3787

Samarium and compounds
samarium diiodide spirolactonization of cycloalkanones, 7037

Sapogenins
saponaceolides B, C and D, from *Tricholoma saponaceum*, structures, 7109

Schiff bases
chiral Schiff bases, alkylation and protonation, dia–stereoselectivity of reactants, 4611

Selenium and compounds
2',3'–ene–2'–phenylselenonyl uridine, prep of 2',3' modified uridine derivs by Michael addition reactions, 3431
benzeneselenic anhydride, reaction with monosubstituted hydrazones, radical pathways, 1823
homoallylic–, via Lewis acid displacement of sulfones, 323
phenylselenenyl chloride, reaction with trisubstituted olefins in methanol, 4211

Selenium halogen compounds
7–nitro–1,2–benzisoselenazolinones, NO2 *ortho* to Se, effect on formation and stability of inter–mediates in glutathione peroxidase– like activity, 9053

Silicon and compounds
β–Si effect for electron transfer and stabil– isation of α–carb–anions, one carbon homolgation reagents as basis, 615
2–trimethylsilylmethyl allyltrimethylsilane, functional methylene cycloalkanes from bis–acetals and 4–methylene N–alkyl piperidines from prim amines and poly– oxymethylene, 3981
allylsilane N–acyliminium ion reactions(2), syn– thesis of (±)–α–allokainic acid, 3451
allylsilanes, functionalised, cyclisation, 7689
allylsilanes. reaction with enediols, synthesis 7,8 and 9–membered ring compds, 139
N–bis–silylation. α–amino acids, "benzostabases" as amino protecting group, 9807
siloxycyclopropanes, Pd catalysed caronyl– ation, synthesis of 1,4–dicarbonyl compds and 4–keto pimelates, 3935
silylimines and ester enolates, synthesis monocyclic β–lactams, 9061
vinylsilane terminated cycloacylation, prep 4–and 6–menbered cyclic ketones, 8111

Silver and compounds
prim–, radical–chain deoxygenation, 8969

Solvents and solvent effects
alkyl carboxylate–, enzyme catalysed transesterification, resolution sec alcohols, 7645
and intramolecular assistance, *ortho*– substit methyl cinnamates, stereoselective addition of R2CuLi, 4739
effect, result of frontier molecular orbital interaction, Diels–Alder reactions of N–acyl–*o*–quinone monoimide behaving as diene or dieno– phile, 5857
hexafluoroisopropanol for rearrangements via zwitterionic intermediates, 6725
lithium perchlorate catalysis, hetero Diels–Alder reaction, Li cation effect, 8399
nitriles effect directing β–O–glycosidations and formation of nitrilium–nitrile conjugate in synthesis of β–glycosides, 9985

Solvolysis
role of high press on reactions, Report, 8463

Spiro compounds
2–spirobenzopyrans, synthesis, prep of cyclic analogs of precocene I and related compds, 4775
chiral spirocyclic (Z)–5–arylmethylene–1,3–oxazine–4,6–diones, new chiral heterodienes, 7271
functionalised hetero spiranic compds via photocylisation N–aroylenamines derivs, 7301
side–chain functionalised 1,7–dioxa–spiro–[5.5]undecanes, Hg–mediated routes, 1985
spiro–1–pyrazolines, thermal decomp, 8119
spirocyclohexanes via photocyclisation N–benzoylenamines, 7287
spirolactones via Diels–Alder reaction of electron–rich dienes and protroanemonin, 5895
spirolactonization of cycloalkanones, 7037
triangulanes, synthesis of bismethylene derivs, 5769

Stereochemistry
1,4,5,8–tetraazadecalins, NMR and molecular mechanics, 1013
2–substit 4–thia–z–olidinylacetic acid, 7029
and mechanism, fatty acid and polyketide biosynthesis using chiral malonates, 6015
and regiochemistry, coupling phenylsulphenyl–, phenylsulphinyl– and phenylsulphonylpentadienyl metals, 7489
antifungal agent restricticin from *Penicillium restrictum*, 3915
C19 position in talcarpine and talpinine, NOE experiments, 1383
course of modified Polonovski reaction and mercuric acetate oxidation, prep of 2–substit 1,2,3,4,6,7,12,12*b*–octahydroindolo[2,3–*a*]quinolizines, 6371
cycloprotobuxine–A (3b–20*R*–chiralty) and isomeric compds with 3b,20*R*– and 3a,20*R*–configuration, 2957
detn in acyclic polyhydroxylated compds by vicinal coupling constant/molecular mechanics method tested with alditol peracetates, 4579
diastereoisomeric rigid benzocondensed–epoxides, gas–phase acid–induced ring opening, 4683
effect of N–protecting groups on [4+2] cycloaddition of activated dienes to α–amino aldehydes, 1053
intramolecular reaction, allyloxy radicals, 6–centered transition states, 8417

relationships in non–rigid mols, use of promolecules, 31
requirements, α– and β–adrenoceptor antagonists, Report, 9953
requirements, indirectly acting sympathomimetic amines, Report, 9953
serine hydroxy– methyltransferase, (2*R*)– and 2(*S*)–[1 13C]2–amino–2–methylmalonic acid as chiral substrates, 497
thermal decomp products, spiro–1–pyrazolines, 8119
[2,3]–sigmatropic rearrangement of substituted propargyl N,N–dialkylamidosulfoxylates. 3353

Stereocontrol
and regiocontrol, allyllithium gener– ation via allylphenyl thioether lithiation, lavandulol terpenoid syntheses, 9727
approaches to key intermediate of 1β–methylthienamycin, 7117
intramolecular nitrile oxide cycloaddition to 2–furylthiol– and 2–furylmethanethiol derivs, 3869
syntheses conformationally restricted analogs of serotonin, 8653
synthesis of erythronolides A and B in (C5–C9)+(C3–C4)+(C1–C2)+(C11–C13) sequence from 1,6–anhydro–β–D–glycopuranose, synthesis of C1–C10 and C11–C13 segments, 2291
synthesis of erythronolides A and B in (C5–C9)+(C3–C4)+(C1–C2)+(C11–C13) sequence from 1,6–anhydro–β–D–glucopyranose, 2317
synthesis of hydroxyl– ated tricyclic systems by annulation of 2–cyclohexen–1–one, 5491
synthesis, 1b–methyl– carbapenem key intermediate by Reformatsky reaction of 3–(2–bromo– propionyl)–2–oxazolidone derivs with 4–acetoxy–2–azetidinone, 2801

Stereodynamics
and conformation, furan–3–aldehyde and corresponding furoyl σ–radical, 6427

Stereoisomerism
γ–hydroxy–isoleucine–, and corresponding lactones, synthesis and structure, 6469
(+)–hydantocidin, aldol addition approach, 2121
(+)–hydantocidin, synthesis, 2145

Stereoselection
(–)–canadensolide, synthesis from D–glucose, 519
1–oxa–2,3–cyclohexadiene, formation of [4+2] and [2+2] adducts with dienes or olefins, 4603
acetylations, stereogenic silylenolethers via norephedrine derived oxazolidines, 7925
addition of R2CuLi to *ortho*–substit methyl cinnamates, intramolecular assistance and solvent effects 4739
addition, organo–Cu reagents to N– acyliminium ions, prep of *trans*–2,5–disubstituted pyrrolidines, 573
aldol condensation between 3–keto and aldehyde sugars, 189
and regioselective hydroboration, route to precursors of ecdysteroids, 7059
and regioselective oxidation of flavan–3–ol–,4–arylflavan–3–ol–, and biflavanoid derivs with 2,3–dichloro–5,6–dicyano–1,4–benzoquinone, 6705
chelation and non– chelation controlled reduction of α–methoxy–α–phenyl–thioketones, 3853
E,E– and *E,Z*–dienes, *E*–enynes and *E*– 1,2,3–butatrienes, conjugated, synthesis via alkenylborane derivs, 343
enone moiety, reduction by sodium bis(2–methoxy–ethoxy)(1,1,1,3,3,3–hexafluoro–2–propoxy)aluminum hydride, 2773
enzymatic hydrolysis of racemic N–acylated 1–amino–alkylphosphonic acids, prep of optically active 1–aminoalkylphosphonic acids, 3989
homochiral 'tricyclic heart' of manzamine A1, synthesis, 2005
hydrogen transfer with chiral NADH models as function of configuration and conformation, 9369
in chiral boron enolate aldol reactions, computational study using transition state modelling, 3471
intramolecular Diels– Alder reactions, sulphonyl–substituted trienes, 3095
octopyranose derivs, synthesis, 8025
prep, indolo– quinolizidine N–oxides, predominant conformations, 2879
Reformatsky reactions of 3–(2–bromo–propionyl)–2–oxazolidone derivs with aldehydes, 2821
sesquiterpenoids, synthesis of phyto– toxins, (+)–gigant–enone, (+)–phomenone and (+)–phaseolinone, 1649
synthesis (3S,5E)–(–)–3,9–dimethyl–6–isopropyleneca–5,8–diene–1–yl acetate, sex pheromone *d'Aonidiella citrina*, 10015
synthesis of α–linked saccharides via per O–benzylated 2–pyridyl 1–thio hexopyranosides as glycosyl donors and MeI as activator, 6435
synthesis of (±)–tetra–ponerine–8, 3805
synthesis of (+)–testosterone via intramolecular 1,3–dipolar cyclo– addition of nitrile oxide, 6635
synthesis of (–)–epi–podophyllotoxin and (–)–podophyllotoxin 4675
synthesis of 4– or 5–substit 2–benzyl– and 2–benzoyl–pyrrolidines via anodic oxidation of δ–alkenylamines, 747
synthesis of vinyl– benzothiazoles and their epoxides, 3365
synthesis oligo– saccharides via 2–O–substit 2– pyridyl 1–thioglyco–pyranosides on activation by MeI, 9721
tetrahydrofurans, 2,5–disubstit, *m*–chloro–peroxybenzoic acid promoted synthesis from α or γ–allyl–β–hydroxy esters, prep of (±) methyl nonactate, 4143
tetrahydrofurans, substit, stereo–selective synthesis, analysis by PMR, MNDO and MM2 calculations, 297
tilivalline and analogs, synthesis, 5051
two–step prep 1,4–dialkyl–1,4–dimethoxycyclohexa–2,5–dienes, 7471

Stereospecificity
alkaloidal monoterpenoids, synthesis of (±)–epi–7,7a–tecomanine, 9195
and regioselective substitution, unsymmetrical 1,2–diols using 1,3,2λ5–dioxa– phospholane, 1603
cis–bicyclo[3.3.0]octane–1–carbonyl derivs by rearrangement 1–chloro–9–hydroxybicyclo[3.3.1]– nonanes, 9097
natural alahopcin, synthesis, 5835
solid state sodium borohydride reductions of cage diketones 6571
syn–stereospecificity of acylamidation, concerted mechanism, 5577

synthesis, 1,5–dien–3–ynes and 1,3,5–trienes, identification of trienic sex pheromones, 7767
transformation of uvidin A into (–)–cinnamosmolide, 6769

Steric effects
highly congested β–diketones via reaction of Cu β–diketonates under free radical conditions, 8031
hindrance, unusual effects in NMR spectra of *o,o'*–dialkylsubstit benzylidene dichlorides, 5237
sterically congested carbon framework via 5–hexenyllithium cyclisation, synthesis of (±)–cuparene, 7727

Steric effects
wrong number fluorine, effect on reactivity of alkylating moieties, 1001

Steroids and sterols
(+)–testosterone, stereoselective synthesis via intramolecular 1,3–dipolar cycloaddition of nitrile oxide, 6635
(–)4,8,β–dimethyl testolactone, synthesis from (+)0–15–methyl isoagathate, 4375
14,17α–bis(hydroxymethyl)–3–m ethoxyestra–1 ,3,5(10)–trien–17β–ol, synthesis
14,17–hetero–bridged 19–norsteroids, 7377
17β–estradiol derivs with N–butyl,– N–methyl alkylamide side chain at position 15, 7751
17α–ethynyloestradiol, A–ring halogenated derivs, regioselective synthesis, 2871
2–oxasteroids via photosensitised oxidation of α–keto enols, 8361
20–hydroxyecdysone and side chain homologues from poststeron 3753
9,11–secosterol from *Spongia officinalis*, structure and synthesis of 3β,6α–dihydroxy–9–oxo–9,11–seco–5α–cholest–7–en–11–al, 7937
androst–4–en–3–one, 18–substit, potential inhibitors of aldost–erone biosynthesis, 7309
cardiotonic–, and Erythrophleum alkaloids, structural parallels, 7951,7965
ecdysteroids, route to precursors using a regio–and stereo–selective hydroboration, 7059
estradiol–3–methyl–17–t–butyl diether via zinc chloride induced thioalkylation of aluminium enolates, 7583
glycosides from *Tylophora sylvatica*, characterisation, 3545
isoxazolidines, non–sensitized photo–oxygenation, 6389
methylsulfonylfurans and a methylsulfonyl–thiophene, synthesis and androgen receptor affinity, 5099
oxygenated sterols from *Eichhornia crassipes*, plant growth inhibitors, 7129
physalin A, benzilic acid rearrangement to neophysalin. structural revision, 2103
tritiated 3–dehydro– ecdysteroid syn– thesis, putative precursor of ecdy– steroid biosynthesis in *Locusta migratoria*, 7067
weinbersterol disulfates A and B from *Petrosia weinbergi*, 1185

Strain
1–azatriptycene and dervs, prep, 183
strain energy effect, electron transfer reactions of bridgehead halides, 941

Structures
detn, logic for, applied to indole alkaloids, 3655
natural products by one–dimensional proton–carbon correlations, 3521

Structure activity relationship
cardiotonic steroids and Erythrophleum alkaloids, structural parallels, 7951,7965
characterisation of rearranged aza–dirachtins, 9231
conformation–activity relationship, antitumor bicyclic hexapeptides RA–VI and –VIII from *Rubia cordifolia*, 7007
ipsdienol, relationship between biological activity and absolute configuration, 2163
rac 2–hexyl–3–hydroxy–4–pentanolide (NFX–2), 6623
thymidine derivs with phosphate–isoteric methylene acetal linkages, synthesis, 1547

Substituent effects
1,5–heteroatom attached to heteroatom, effect of conformation of naphtho[1,8–*b,c*]–1,5–dithiocin–1–1–dioxide, –1,5–dioxide, –1,1,5–trioxide and –1,1,5,5–tetraoxide, 5077
C–12 groups, mesyloxy groups at C–17 and C–15/–16 double bond in rearrange ment bicyclo[3.2.1]– heptane moiety of 12,17–bifunctionalised *ent*–beyer–15–enes, 9103
carbonyl group in cyclization of 1–hexenyl radicals, 9463
effect on site selectivity in Diels–Alder cycloadditions using 5–ylidene–2(5H)–furanones as dienophiles, 8775
olefinic–, effect on C–C bond formation in intramolecular cyclcisation of 2'–olefinic side–chain of anodically oxidised 4–phenyl– phenols, 655

Substitution
α–, crotonic esters, synthesis of natural derivs of 6–ethyl–juglone 4287
5–halo–1,2,3–triazines with electrolytically generated superoxide 4317
and additions at π–systems, role of high press, Report, 8463
captodative–, cyanoketenes with ether, thioether or amino substituents, 8161
intramolecular free– radical–, pyridinium rings 4077
Me–, 11–methyl–9– demethyl–and 11–methyl–9,13–didemethyl–reti nal, effect on polyene conform–ation, photoisomerization and form– ation of visual pigments, 3711
nucleophilic–, catalysed by zwitter– ionic micelles, 83
nucleophilic–, reactions of quinones, Report, 8043
photo–, aromatic and heteroaromatic rings, addition and substitution mechanism, 5029
reactions of pyrazolo–azolopyridazines, 2925
SRN1 reaction between imidazo[1,2–*a*]pyridine derivs and 2– nitropropane, prep of pharmacologially important compds, 5173
SRN1, arylation of potassium 2,4–pentanedionate via reaction with diazosulfides, 333
stereospecific and regioselective–, unsymmetrical 1,2–diols using 1,3,2λ5–dioxaphospholane, 1603
vicarious nucleophilic–, hydrogen in electrophilic alkenes, 5001

Sulfenic acid and derivatives
phthalimidosulphenyl chloride reactivity, synthesis of unusual thiirane derivs, 7185
propargyl arene– sulfenates, substi, diastereoselectivity of [2,3]–sigmatropic rearrangement, 3353
sulfenyl group, protective for amines, 8145
sulfenylation, alkyl and aryldithio pyridine N–oxides, synthesis of disulfides, 6127

Sulfides see also Disulfides
arylfluoroalkyl–, anodic methoxylation and acetoxylation, 625
enantioselective oxidation to sulfoxides, presence of bovine serum albumin, 8385
homoallylic–, via Lewis acid displacement of sulfones, 323

organic–, perborate oxidation, kinetics and mechanism, 8733
peroxidase–mediated oxidation, M.O.–techniques, 7525
reaction with tetranitromethane, oxygen transfer by dis– sociative electron transfer, 3773

Sulfinyl compounds
chiral 2–*p*–tolyl–sulfinylquinones, synthesis, 605
O–sulfinylation, alcohols with methanesulfonyl cyanide or *p*–toluenesulfonyl chloride, 9167

Sulfones
βγ–bifunctionalized sulfones, prep, 5193
γ–functionalized vinyl and allyl–, synthesis, 6337
allylsulfones, free radical cyclisation with 1,6–dienes, 5425
Lewis acid displacement of–, synthesis of homoallylic sulfides and selen– ides, 323
vinylsulphones, decarboxylative radical addition, transformations of geminal (pyridine– 2–thiyl) phenylsulphones, 7091

Sulfonic acid and derivatives
4–hydroxybenzenesulfonyl chlorides, 3,5–disubst, prep cyclic tetramers, 7353
arenesulfonyloxy groups, reactions as electrophiles or as leaving groups, Report, 1109

Sulfonium salts
biomimetic transalkylation of olefins, 6939
vinylphosphonium bromide, decarboxylative radical addition, transform– ations of geminal (pyridine–2–thiyl) phenylsulphones, 7091

Sulfonyl compounds
methanesulfonyl cyanide or *p*–toluenesulfonyl chloride, O–sulfinylation of alcohols, 9167

Sulfoxides
1,3–dithiolane–, rearrangement mechanisms, 8091
allylic N,N–dialkyl– amidosulfoxylates, substit [2,3]– sigmatropic rearrangement, mol structure of [(1')*S**, (S)*S**]–2'*E*)–4–[[3'–(4"–bromophenyl)–1'–methyl–2 '–propenyl]–sulfiyl]–morpholine, 6655
chiral cyclic β–iminosulfoxides, synthesis and hydride reductions, 10035
via enantioselective oxidation of sulfides, presence of bovine serum albumin, 8385

Sulfur compounds
aryl–sulfur bond formation, transition metal mediated thiation of aromatic rings, 8621

Sulfur halogen compounds
chlorosulfides, diastereofacial selective reaction with silyl enol ethers, 8753

Surfactants
catalysis, zwitterionic micelles in nucleo– philic substitutions, 83
monodisperse perfluoro–polyethoxylated amphiphilic compds with two–chain polar head, 411
non–ionic chiral–, 6–alkylthio–and 6–alkylsulfonyl–6–deoxy glycosides, prep, 5185

Tannins
dimeric hydrolysable–, structure of isorugosin and hirtellin B with trisgalloyl group, 3575

Tautomerism
1–arylsulfonamido–1–methylthio–2–nitroethylenes, 3887
ring–chain–, and 3 to 4–component equilibria in fused– ring tetrahydro–1,3–oxazines, 4031

Techniques
homonuclear 1D correlation NMR for oligosaccharides, 3535
selective INEPT, one–dimensional proton–carbon correlations, structure detn of natural products, 3521
spectroscopic and database strategies for structure detn of aplysolides A and B and aplyolide A, 3585

Telocidins
A–2–, lyngbyatoxin A, pendolmycin and (*R*,*E*)– and (*S*,*E*)–7– (3,7,11–trimethyl–1,6,10–dodecatrien–3–yl)–(–)–in dolactams, synthesis, 8545
dihydroteleocidin B, teleocidin B–3 and teleocidin B–4, synthesis, 8559
intermediates for synthesis, method of N–(7–alkyl–4–indolyl)–N–methyl–L–valine esters, 8535
pendolmycin tumor promoter, synthesis, 7615

Terpenoids
(–)–α– and (–)–β– pinenes, biosynthesis, 5933
(–)–Δ9(12)–capnellene, synthesis via chiral bicyclo[3.2.0]heptenes, 8259
2α–methylhopanoids, in *Methylobacterium organophilum* and sulphur induced isomerization of 2β–methylhopanoids in sediments, 7081
24–*nor*–triterpenoids in sediments and crude oils, charact–erisation by comparison with synthesized standards, 3779
biomimetic synthesis of 12–oxy–pimaranes from 12,13–epoxylabdadienes, 4441
difuransesquiterpenoid, athanasin, synthesis and abs and relative configuration, 9179
diterpenoids, 6β–eudesmonolides with functions at C–1 and C–6, synthesis from eudesmanes by *Curvularia lunata*, 91
diterpenoids, acid glycerides from *Austrodoris kerguelensis*, 9743
diterpenoids, alkaloid delatisine, from *Delphinium elatum*, 9585
diterpenoids, clerodane and aromatic seco–clerodane from *Salvia rhyacophila*, 7199
diterpenoids, from *Homalanthus acuminatus* and *Chrysobalanus icaco*, HIV inhibition, 4547
diterpenoids, gaudichaudiosides A–E, glycoside constitutents from *Baccharis gaudichaudiana*, 8515
diterpenoids, gemmacolides A–F, new chlorinated compds from *Junceella gemmacea*, 3271
diterpenoids, hydroxylation of sclareol, manool and derivs by *Mucor plumbeus*, 8339
diterpenoids, *neo*–clerodane, chemical trans– formations of teubotrin, 10129
diterpenoids, new xenicane and hydroazulenoid, from *Dictyota divaricata*, 1399
diterpenoids, pseudo– pteranoids of *Pseudopterogorgia acerosa*, NMR investigation, 8679
diterpenoids, rearrangement, bicyclo[3.2.1]heptane moiety of 12,17–bifunctionalised *ent*–beyer–15–enes, 9103 9103
diterpenoids, synthesis and configuration of (–)–auricularic acid and its C–4 epimer, 3829
diterpenoids, two *neo*–clerodane with unusual 2,6–dioxa–bicyclo[2.2.1]heptane structural moiety, 3463
indole–diterpene mould metabolite, paspalicine study, synthesis of 3',4',7',7'a, 9',10'.11',11'a–octahydro–4',4',–7'a–trimethyl–spiro[1,3–dioxolane]–2,8'(6'*H*)–2'*H*–3',5'a–epoxynaphth–[2,1–*b*]oxepin–2'–one, 6407
methyl–8,14–β–epoxypimarate, prep and isomerisation leading to cycloditerpene via Grob fragmentation, 9187

monoterpene cyclases, evaluation, multiple product formation by isotopically sensitive branching, 5933
monoterpenoids, alkaloidal, stereospecific synthesis of (±)–epi–7,7a–tecomanine, 9195
monoterpenoids, five new from *Portieria hornemannii*, 5717
monoterpenoids, lavandulol syntheses, regio– and stereo–control allyllithium generation by allyl phenyl thioether lithiation, 9727
natural products synthesis via anodic oxidation of phenols, 635
norditerpenoid alkaloids, delpheline, 8,9–methylene–dioxylappaconitine and dictyzine, NMR study, 4299
p–mentha–1,3,8–triene, α– and γ–terpinene and γ–phellandrene, photochemical reactions, 3037
sesquiterpene, (±)–(Z)–9–(bromomethylene)–1,5,5–trim ethylspiro [5,5]undeca–1,7–dien–3–one, total synthesis, 2155
sesquiterpenoids, β–cedrene from cedryl acetate, 8155
sesquiterpenoids, (±),β–cuparene, synthesisvia 5–hexenyllithium cyclisation, 7727
sesquiterpenoids, (±)–β–cuparenone, (±)–laurene and epilaurene via radical cyclisation, 481
sesquiterpenoids, (±)–aplysin, (±)–filiformin and their debromo analogues, synthesis, 10003
sesquiterpenoids, (–)–kessane, synthesis from natural (+)–aromadendrene–II, 4409
sesquiterpenoids, *Laurencia obtusa*, laurobtusol structure, 10101
sesquiterpenoids, pseudoguaianolide esters from *Ambrosia psilostachya* with angiotensin II binding activity, 4869
sesquiterpenoids, stereoselective synthesis of phytotoxins, (+)–gigantenone, (+)–phom–enone and (+)–phaseolinone, 1649
sesquiterpenoids, synthesis of (±) heritol, 5759
sesquiterpenoids, synthesis enantio– meric paniculide B, 7259
sesquiterpenoids, transformation of uvidin A into (–)–cinnamosmolide, 6769
sesquiterpenoids, vernolepin via electroreductive cyclisation of 2(5H)furanones, 383
sesquiterpenoids–, biotransformation of 6β–eudesmanolides functionalized at C–3 with *Curvularia lunata* and *Rhizopus nigricans* cultures, 5811
sesterterpenoids, ophiobolin K and 6–epiophiobolin K, structure and conformation, 6931
sesterterpenoids, polycyclic bioactive aplysolides A and B and aplyolide A, structures, 3585
triterpenes, new antineoplastic isomalabericane, stelliferins A–F from *Jaspis stellifera*, 2181
triterpenes, swertanone from *Swertia chirata*, oxidation products 2337
triterpenoids, holothurinosides, antitumour non sulphated glycosides from *Holothuria forskalii*, 4753
triterpenoids, pentacyclic of arborane family, synthetic approaches, 7045
triterpenoids, saponaceolides B, C and D, from *Tricholoma saponaceum*, structures, 7109
triterpenoids, structure of four oligoglycosides from *Anagallis arvensis*, 5215

Theoretical calculations

1,4,5,8–tetraazadecalins, conformation, structure and stereoelectronics, 1013
3'–α–fluoro– and 3'–α–azido–thymidines, 7363
7,8–epoxycembranoid, conformational analysis, 9915
8–amino–, 8–methyl– amino– and 8–di– methylaminoadenosines, semiempirical molecular orbital studies, 4693
AMI semiempirical computations, naphtho[1,8–*b*,*c*] –1,5–dithiocin and its S–oxides, conformation in soln, 5087
and dipole moment, hindered β–diketones with bulky substiti at intercarbonyl position, 6511
and NMR, structure, conformation and stereoelectronics of 1,4,5,8–tetraazadecalins, 1013
chemical interactions in crown ether–cation complexes, 9317
computational studies, synthesis of polyquinenes via Weiss reaction, Report, 3665
computational study, 2–(2–ethynyl–phenyl–X–)–pyri midine reactivity, intra–molecular Diels– Alder reactions, 1753
conformational analysis, 2–alkyl–1,4–dithianes and related comps, 9455
dehydroquinate synthase, inhibition by carbaphosphonate predicted, 2423
drug design, generation of structures based on known receptor structure, 8985
free energy–, in Monte Carlo simulations to quantify association of nucleotide base pairs in chloroform, 2491
hexafluoroisopropanol for rearrangements via zwitterionic intermediates, 6725
M.O.–, compds related to 5,6–dimethoxy–2–(4–methoxyphenyl)–benzothiazole, 6493
MNDO and AM1–, halobridgehead compds, electron transfer reactions, 941
molecular modelling, structure of extracellular peptide produced by *Pseudomonas reactans*, 3645
PM3 study, reactions of propene with singlet oxygen and enophiles, 1707
semiempirical M.O. techniques, peroxidase–mediated oxidation, phenols, anilines, sulfides and thiobenzamides, 7525
tetrahydrofurans, substit, stereo–selective synthesis, diastereoisomer analysis,297
theoretical and experimental study, lithium, sodium and potassium chloroallyl systems, 8739
transition state modelling, stereo–selectivity in chiral boron enolate aldol reactions, 3471

Thermochemistry

2+2–cycloadditions, diphenylketene and diphenylketen–N–(4–methyl–phenyl)–imine to 5–membered heterocyclic 2,3–diones, 3045
conformation and stereodynamics, furan–3–aldehyde and corresponding furoyl σ–radical, 6427
stabilization effects in alkanes and in prim, sec and tert alkyl radicals, 6777
thermal decomp, spiro–1–pyrazolines, 8119
thermal reactions, 2–aryl–1–vinylcyclobutanol, 7551
vicinal coupling constant/molecular mechanics, detn of stereochemistry in acyclic poly– hydroxylated compds tested with alditol peracetates, 4579

Thiadiazoles
1,3,4–thiadiazole ring, iminophosphorane–mediated regioselective annelation into 1,2,4– triazine ring, prep of mesionic compds derived from [1,3,4]thiadiazolo]2,3–*c*]– and [1,3,4]thiadiazolo[3,2–*d*]–[1,2,4]triazines, 6747

Thiazetes
4H–thiazete–S,S–dioxides, synthesis via rearrangement of N–arylsulfonyl amidines, 1937

Thiazines
transition metal mediated thiation of aromatic rings, 8621

Thiazoles
2,4–disubstituted–, via lithiation of 1.2.3–triazolo[5,1–*b*]thiazoles, 2861
aminothiazole–oximetosylates, reaction with thiols, 10045

Thiazolidines
4–thiazolidinylacetic acid, 2–substit, synthesis and stereochemistry, 7029

Thiiranes
regioselective conversion to alkoxy and acetoxy di–sulphides and dithianes with Ce based oxidants, 149
unusual thiirane derivs, synthesis, phthalimidosulphenyl chloride reactivity, 7185

Thioacetals
α–oxoketene dithio–and β–oxo–dithio–acetals, cycloaromatisation with benzyl–, 1–(naphthylmethyl) and 2–(naphthylmethyl)–magnesium halides, synthesis of condensed polynuclear aromatic hydrocarbons, 3499
α–oxoketene dithioacetals, lead tetraacetate oxidation, 305
(*Z*)–α–hydroxyketenedithioacetals, prep and thio–Claisen rearrangement to α–allylic–β–hydroxydithioesters, stereocontrol of two chiral centers, 6275

Thioalkylation
zinc chloride induced–, aluminium enolates, enantioselective synthesis estradiol–3–methyl–17–t–butyl diether, 7583

Thiobenzamides
peroxidase–mediated oxidation, M.O.–techniques, 7525

Thiocarbonyl compounds
α–methoxy–a–phenylthio ketones, chelation and non–chelation controlled reduction, 3853
β–hydroxydithioesters, deprotonation and conversion to (Z)– α–hydroxyketene dithioacetals and thio–Claisen rearrangement to α–allylic–β–hydroxydithioesters, stereocontrol of two chiral centers, 6275
2–pyridylthioester titanium enolates, condensation with imines, prep β–lactams, 8767
derivs of methyl 3,6–anhydropyranosides in α–D–gluco, α–D–manno and β–D–galacto seroes, synthesis and radical reduction, 6381
O–ethyl S(2–azido–2–deoxy–D–galactopyranosyl)–dithiocarbonates, glycosyl donora via azido– xanthation of galactals, 5149
S–t–butyl thioates and 4–methoxyphenylthiomethyl esters, C–S cleavage, deprotection carboxylic acids, 867
thiocyanohydrins, precursors of unstabilized thiocarbonyl derivs, 4927
thioester titanium enolates, directly generated, aldol condensation with aldehydes, 7897
thionocarbonate intermediates in radical deoxygenation of prim alcohols, 8969

Thiolanes
1,3–dithiolanes, conversion to 1,4–benzodithians, 4187
dithiolene dyes with strong near–IR absorption, synthesis, Report, 909

Thiols
2–furylthiol– and 2–furylmethanethiol derivs, intramolecular cycloaddition to nitrile oxides, 3869
reaction with aminothiazole–oximetosylates, 10045
reduction of 5– uracilyl–methylenepyridinium salts, model in step of thymidylate synthase reduction, 4361

Thiophenes
2,3–disubst–, syn– thesis, 2–(2–heteroaryl)imidazoline directed metallation studies, 9901
benzo[b]thiophenium S,C–ylides, prep, structure and comparison with thiophenium analogues, 8611
phototoxic 2,2':5,2''–terthiophene derivs with substit in 3'– of 5–position, synthesis, 8443
steroidal methyl–sulfonylthiophene and methylsulfonylfurans, synthesis and androgen receptor affinity, 5099

Thiopyrans
cis– and trans–3,4–dimethyl–6–t–butyl–5,6–dihydro–2H–thiopyran–S–oxides and S–methyl cations, conformation and configuration, 7677

Thiopyridines
alkyl and aryldi– thiopyridine N–oxides, sulfenylation synthesis of disulfides, 6127

Thiopyrylium
corands, synthesis and conformation, 1977

Thiosemicarbazones
flavonoid–, reactions under acetylation conditions, 9305

Thiosugars
2–pyridyl 1–thioglyco–pyranosides, 2–O–substit, activat– ion by MeI, synthesis oligosaccharides, 9721
per O–benzylated 2–pyridyl1–thio hexopyranosides as glycosyl donors and MeI as activator, stereoselective synthesis of α–linked saccharides, 6435

Thioureas
epimeric 2,6–dimethyl–4–thio–ureido)–1,3–, 2,6–dimethyl–4–(N'–substit thioureido)– 1,3–dioxanes, prep and crystal structure of *rel*–2*S*,4*S*,6*S*–2,6–dimethyl–4–(N'–benzyl–thioureido)–1,3–dioxane, 4665
N–phenylacyl(acetylmethyl)–N'–(2–deoxyglycosyl)–, prep, 5797

Tin and compounds
(*Z*)–1–ethoxy–2–tributylstannyleth ene, Pd–catalysed cross coupling with aryl bromides, construction of condensed heteroaromatics, 1877
Bu3SnH, use reductive cyclisation, oxidation during process, 10119
organotin phosphate condensates, alcohol catalysed ring opening oxiranes, inversion at tertiary and benzylic centers, 7625
organotin triflate, catalyst Michael addition enol silyl ethers, 9773
SnC14 vs TiC14– mediated coupling N–6–benzoyladenine and perbenzoylated 2–deoxypyranose, application synthesis homochiral acyclo and carboacyclo– nucleosides, 9993
stannylmetallation, conjugated enynes, 1163
tetrachloride–induced π–cyclisation, glycine cation equivs to substituted pipecolic acid derivs, 4039
tributylethynylstannane, cycloaddition of nitrile oxides, prep of 5–(tributylstannyl)isoxazoles, 5111

Titanium and compounds
enolates of thioesters directly generated, aldol condensation with aldehydes, 7897
TiC14 vs SnC14– mediated coupling, N–6–benzoyladenine and perbenzoylated 2–deoxypyranose, application synthesis homochiral acyclo and carboacyclonucleosides, 9993
titanium enolates of 2–pyridylthioesters, condensation with imines, prep β–lactams, 8767
titanium tetrachloride induced synthesis of N–phosphinoylimines and N–sulphonylimines directly from aromatic aldehydes, 5561

Toxicity
cytotoxic bis–tetrahydrofuranic γ–lactone acetogenins, molvizarin and motrillin from *Annona cherimolia*, 8195
ninhydrin and analogs, Report, 8791 TET–43
phototoxic 2,2':5,2''–terthiophene derivs with substit in 3'– of 5–position, synthesis, 8443
sodium diethyl–phosphite–carboxyborane and related compds, synthesis, characterization and antitumor prop, 6915

Toxins
(–)–epipodophyllotoxin and (–)–podophyllotoxin, synthesis, 4675
A–2–teleocidin, lyngbyatoxin A, pendolmycin and (*R,E*)– and (*S,E*)–7– (3,7,11–trimethyl–1,6,10–dodecatrien–3–yl)–(–)–indolactams, 8545
alkaloids from dendrobatid poison frogs, further *cis*–de–cahydroquinolines and 8–methylindolizidines 5401
alkaloids from dendrobatid poison frogs, further pumiliotoxins and allopumiliotoxins and reassignment of the keto function in pumiliotoxin 307F, 5415
cytotoxic peptides, fellutamides A and B, from *Penicillium fellutanum*, 8529
NSTX–3, from *Nephila maculata*, total synthesis, 3305
okadaic acid, proton and carbon NMR, 7437
synthesis of phytotoxins from pathogenic fungi, 1649

Transfer reactions
hydrogen–, with chiral NADH models as function of config–uration and conform– ation, 9369
oxygen –, by dissociative electron transfer of tetranitromethane with diazo compds and sulfides, 3773

Transition metals
catalysed elimination from tert alcohols and acetates, prep of olefins, 8155
mediated synthesis, prenylated phyto– allexins from *Morus alba*, 7991
mediated thiation of aromatic rings, 8621
transition metal directed synthesis of phytoalexin moracin M from *Morus alba*, 7981

Transition states
calculated–, addition of chiral propion– aldehyde, chloro–acetaldehyde and 2–chloropropionaldehyde to nucleophiles, 9005

Transport
cation–, and complex– ation of C3symmetric tripodands, perhydrotriquinacenic hosts, 5867

Trapping reactions
C2–diylide, Ph3P=C=C=PPh3,formation via reaction of *E*–1,2–bis[triphenyl–(trifluoromethane–sulfonyloxy)phospho]ethylene, Ph3PCH=CHPPh3.2OTf, with bases, 4539
intramolecular cyclization–, carbon radicals by olefins functionalisation of 2'– and 3'–carbons in β–D–nucleosides, 2237
intramolecular–, difluoroalkyl radicals by tethered olefins in asymmetric syntheses of 2,4–di–substit–3,3–difluorotetrahydrofurans, 9439

Triazines
5–halo–1,2,3–triazines, substitution with electrolytically generated superoxide, 4317

Triazoles
1,2,4–triazoles, N– substit, spectral and structural assign–ments, NOE difference spectros– copy, 5471
substit 1,2,3–, spectral and structural assignments, NOE difference spectroscopy, 9783

Trienes
1,3,5–trienes, synthesis, identification of trienic sex pheromones, 7767
cycloheptatriene systems, anodic oxidation, prep of non–benzenoid aromatic compds, 593
sulphonyl–substituted–, intramolecular Diels–Alder reactions, 3095

Troponoids
1,2,3,4,5,6–*tris*–(bicyclo[2.2.2]oct eno) tropylium ion, formation, properties, and reactions, 6951
via anodic oxidation of cycloheptatriene systems, 593

Tumor promotors
A–2–teleocidin, lyngbyatoxin A, pendolmycin and (*R,E*)– and (*S,E*)–7– (3,7,11–trimethyl–1,6,10–dodecatrien–3–yl)–(–)–indolactams, 8545
dihydroteleocidin B, teleocidin B–3 and teleocidin B–4, 8559
hymatoxins B–E from *Hypoxylon mammatum*, isolation and structure, 8351
N–(7–alkyl–4–indolyl)–N–methyl –L–valine esters, method for teleocidin inter– mediates, 8535

Uracils
derivs, reaction with thiols, formation of thymine deriv, 4361

Vanadium and compounds
promoted, pinacol cross coupling, enantio– and diastereoselective synthesis of 1,2– diols, 5737

Vitamins
1α–hydroxy vitamin D3, improved synthesis via previtamin D3 adduct, 9419
11–methyl–9–demethyl–and 11–methyl–9,13–di–demethyl–retinal. effect of Me substitution on polyene conformation, photoisom–erization and formation of visual pigments, 3711
1a,25–dihydroxyvitamin D3 via application of Pd–catalysed coupling of vinyl triflates with enynes, 3485

X–ray crystalography and structure
(–)–8–phenylmenthyl 3–amino–2–hydroxy–5–methylh exanoate, 249
5,6–dimethoxy–2–(4–methoxyphe nyl)–benzothiazole, 6493
7,7–dimethyl–1–oxo–1–phenyl–3–diphenyl–phosphinylhexa–hydro–1H–pyrrolo[1,2–c][1.3.2] oxazaphosphorine, 9053 Tet–44
7,8–epoxycembranoid, conformational analysis, 9915
9,10–annelated–1,4,5,8–tetraoxade calins, structure, conform– ation and stereo– slectronics, multi–disciplinary probe, 5781
abs configuration, E and Z pinna–tifidienyne, 9411
analysis of products, ozonolysis of *endo*–tricyclo[6.2.1.$0^{2,7}$]–undec–9–ene–3,6–dione, 961
anodic coupling, pyridopyrimidine derivs, C–Obond formation, 675
benzochlorins, 5,15–diaryl, 7853
benzo[b]thiophenium S,C–ylides, comp– arison with thio–phenium analogues, 8611

bis–β–lactams, synthesis, 5379
dihydroisocoumarin, structure and conformation, 7869
diterpenoid alkaloid delatisine, from *Delphinium elatum*, 9585
diterpenoids, clerodane and aromatic seco– clerodane from *Salvia rhyacophila*, 7199
epoxypyranosides, organo–Al induced ring–opening, synthesis and structure of γ–hydroxyisoleucine stereo–isomers and corresponding lactones, 6469
marine antibiotic, aplasmomycin, structural study, 3511
naphtho[1,8–*b*,*c*]–1,5–dithiocin–1–1–dioxide, –1,5–dioxide, –1,1,5–trioxide and –1,1,5,5–tetraoxide, 5077
paspalicine study, synthesis of 3',4',7',– 7'a, 9',10'.11',–11'a–octahydro–4',4',7'a–trimethylspiro[1,3–dioxolane]–2,8'(6'*H*)–2'*H*–3',5'a–epoxynaphth–[2,1–*b*]oxepin–2'–one, 6407
pyrrolizidine amino acid with carboxylic group at C–3, isolation of 7A–epi–alexaflorine from *Alexa grandiflora*, 5637
quinocarcin tetracyclic analogs, 2629
rearranged azadirachtins, characterisation and structure activity relationships, 9231
rel–2*S*–4*S*,6*S*–2,6–dimethyl–4–(N'–benzyl–thioureido)–1,3–dioxane, 4665
tripeptide Boc–L–prolyl–L–propargyl–glycyl–glycine methylester, crystal structure, 3947
zinc octamethyl–diphenylporphyrin, crystal structure, 2401
[(1')*S**,(S)*S**]–2'*E*)–4–[[3'–(4''–bromophenyl)–1'–methyl–2'–propenyl]–sulfiyl]–morpholine, 6655
[*S**,(*S*)*R**]–4–[(1,4,4–trimethyl–1,2–pentienyl)–sulfinyl]–morpholine, molecular structure, 3353

Ylides
benzo[b]thiophenium S,C–ylides, prep, structure and comp– arison with thiophenium analogues, 8611
C2–diylide, Ph3P=C=C=PPh3,formation via reaction of *E*–1,2– bis–[triphenyl–(tri–fluoromethane– sulfonyloxy) phospho]ethylene, Ph3PCH=CHPPh3.2OTf,with bases, 4539
carbonyl–, intramolecular cyclo–addition to an acetylene, synthesis 2H,4H and 9bH–furo[3,2–c]benzopyrans, 7713
derived from 2–acylmethyltriazolopyridinium salts, 5277
formation and subsequent reactions, Rh(II)carbenes as catalyst, Report, 1765
glutarimide–, biomimetic synthesis of quinolizidine alkaloids, 8431 Tet–41

Zinc and compounds
diethylzinc enantio– selective addition to aldehydes, 2–[(2*S*)–2–pyrrolidinyl]pyrid–ine as catalyst, 8251
zinc chloride induced thioalkylation aluminium enolates, synthesis estra–diol–3–methyl–17–t–butyl diether, 7583
zinc octamethyl–diphenylporphyrin, inclusion complexation and crystal structure, 2401

Zwitterions see also Betaines,
zwitterionic micelles, catalysts in nucleophilic substitution, 83
zwitterionic intermediates, hexa–fluoroisopropanol solvent for rearrangements, 6725

Author Index 1991

Aalbersberg B. see Alvi K. A. 8943

Abad A. Arnó M. Peiró M. and **Zaragozá J.** Synthesis of (–)-auricularic acid and its C-4 epimer. The absolute configuration of auricularic acid 3829

Abarca B. Ballesteros R. Mojarrad F. Metni M. R. Garcia-Granda S. Perez-Carreño E. and **Jones G.** Triazolopyridines—XI. Ylides derived from 2-acylmethyltriazolopyridinium salts 5277

Abbari M. Cosquer P. Tonnard F. Yeung Lam Ko Y. Y. C. and **Carrié R.** Diels–Alder reactions of *P*-chloro (bistrimethylsilyl) methylene phosphine 71

Abbott S. D. see Baldwin J. E. 5309

Abdel-Baky S. Sotiriou-Leventis C. and **Giese R. W.** Superoxide oxidation of 1-nitropyrene-*cis*-dihydrodiols 5667

Abdou M. see Csuk R. 7037

Abell C. see Crockett N. 6003

Abramovitch A. See Negishi E. 343

Abrams S. R. see Nelson L. A. K. 3259

Abramson N. L. see Karady S. 757

Acevedo J. C. see Banerjee A. K. 2081

Acevedo J. C. see Banerjee A. K. 5641

Ackerman J. H. see Kumar V. 5099

Aclinou P. see Cossy J. 7775

Adam S. A straightforward and high yielding synthesis of mefloquine—II 7609

Adam W. and **Nuñz E. G.** Oxygen transfer by dissociative electron transfer. Reaction of tetranitromethane with diazo compounds and sulfides 3773

Adams C. J. and **Main L.** Cyclisation and subsequent reactions of 2'-hydroxy-6'-methoxy-chalcone epoxide and related compounds 4979

Adams C. J. and **Main L.** Synthesis of 2'-hydroxychalcone epoxides 4959

Adams J. and **Spero D. M.** Rhodium(II) catalyzed reactions of diazo-carbonyl compounds 1765

Adinolfi M. Lanzetta R. Marciano C. E. Parrilli M. and **De Giulio A.** A new class of anthraquinone-anthrone-*C*-glycosides from *Asphodelus ramosus* tubers 4435

Adlington R. M. see Baldwin J. E. 4089

Adlington R. M. see Baldwin J. E. 457

Adlington R. M. see Baldwin J. E. 5309

Adlington R. M. see Baldwin J. E. 5835

Adlington R. M. see Baldwin J. E. 5901

Adlington R. M. see Baldwin J. E. 6795

Adlington R. M. see Baldwin J. E. 8203

Adlington R. M. see Baldwin J. E. 8223

Adlington R. M. see Baldwin J. E. 9881

Adrover B. see Bosch J. 5269

Agami C. Couty F. Prince B. and **Puchot C.** Asymmetric synthesis of *N*-methyl-α-amino esters from a glyoxal derived chiral heterocycle 4343

Agback P. see Földesi A. 7135

Agback P. see Glemarec C. 3417

Agback P. see Koole L. H. 3183

Agback P. see Sund C. 6305

Agback P. see Sund C. 9659

Agback P. see Xi Z. 9675

Agemi K. see Kobayashi J. 6617

Agemi K. see Tsuda M. 2181

Ahmed A. F. see Yoshida T. 3575

Ahond A. see Ettouati L. 9823

Ahuja J. R. see Sonawane H. R. 8259

Aichaoui H. Poupaert J. H. Lesieur D. and **Hénichart J.-P.** Regioselectivity in the C-acylation of 2(3H)-benzoxazolones 6649

Aimi N. see Takayama H. 1383

Akamatsu H. see Komatsu K. 6951

Aksela R. and **Oehlschlager A. C.** Stannylmetallation of conjugated enynes 1163

Al Daher S. see Fairbanks A. J. 131

Al-Husaini A. H. Khan I. and **Ali Sk. A.** Addition reactions of *tert*-butylcyanoketene to silyl enol ethers and conjugated dienes 3845

Al-Husaini A. H. Muqtar M. and **Ali Sk. A.** Study of ketene-alkene cycloadditions and cycloreversions of cyclobutanones 7719

Alajarín M. see Molina P. 6747

Alazard J.-P. Leboff A. and **Thal C.** Alcaloïdes monoterpéniques—III. Synthèse stéréospécifique de la (±)*épi*-7,7a técomanine 9195

Albericio F. see Eritja R. 4113

Albericio F. see Lloyd-Williams P. 9867

Albini A. see d'Alessandro N. 5043

Albini A. see Mella M. 3137

Aldaz A. see Sanchez-Cano G. 877

Alefounder P. R. see Crockett N. 6003

Alexakis A. Marek I. Mangeney P. and **Normant J. F.** Diastereoselective *syn* or *anti* opening of propargylic epoxides. Synthesis of α-allenic alcohols 1677

Alexander M. A. see Kumar V. 5099
Alexander R. see Billington S. 5231
Alexandre C. Bertho C. Tabti B. and **Rouessac F.** Synthèse et réactions de Diels–Alder des 5-alcenyl(3*H*)furan-2-ones 5481
Ali A. Guile S. D. Saxton J. E. and **Thornton-Pett M.** Synthetic studies towards paspalicine: preliminary investigations, and the synthesis of 3',4',7',7'*a*,9',10',11',11'*a*-octahydro-4',4',7'*a*-trimethylspiro[1,3-dioxolane]-2,8'(6'*H*)-2'*H*-3',5'*a*-epoxynaphth-[2,1-*b*]oxepin-2'-one 6407
Ali Sk. A. see Al-Husaini A. H. 3845
Ali Sk. A. see Al-Husaini A. H. 7719
Aljadeff G. see Frimer A. A. 8361
Allcock S. J. Gilchrist T. L. Shuttleworth S. J. and **King F. D.** Intramolecular and intermolecular Diels–Alder reactions of acylhydrazones derived from methacrolein and ethylacrolein 10053
Aller E. see Molina P. 6737
Allison S. Burks S. J. and **Taylor R. T.** Total syntheses of microminutin and other coumarins through the key intermediate isomurralonginol 9737
Allmendinger T. Ethyl phenylsulfinyl fluoroacetate, a new and versatile reagent for the preparation of α-fluoro-α,β-unsaturated carboxylic acid esters 4905
Almansa C. Moyano A. and **Serratosa F.** Perhydrotriquinacenic hosts—I. Synthesis, complexation and transport properties of tripodands of C_3 symmetry 5867
Almarsson Ö. see Schnatter W. F. K. 8687
Almendros P. see Molina P. 4175
Alonso F. and **Yus M.** Reactivity of 3,6-dimethoxy-3,6-dimethylcyclohexa-1,4-diene—II. Regioselective arylation of electron-rich aromatic compounds 313
Alonso F. and **Yus M.** Reactivity of 3,6-dimethoxy-3,6-dimethylcyclohexa-1,4-diene—III. Regioselective α-arylation of ketones via their silyl enol ethers 9119
Alonso F. and **Yus M.** Stereoselective two-step chemical preparation of 1,4-dialkyl-1,4-dimethoxycyclohexa-2,5-dienes 7471
Alonso M. see Nakano T. 2957
Alston P. V see Krow G. R. 8499
Altarejos J. C. see Barrero A. F. 4441
Alonso D. Font J. Ortuño R. M. d'Angelo J. Guingant A. and **Bois C.** Diels–Alder reactions of protoanemonin with heterosubstituted dienes. Synthesis of polyfunctional oxaspiro[4,5]decanes 5895
Althaus J. S. see Ghosh A. 8653
Alvarez M. see Bosch J. 5269
Alvarez-Builla J. see Matia M. P. 7329
Alves-Santana J. D. see Oyler A. R. 6549
Alvi K. A. Crews P. Aalbersberg B. and **Prasad R.** Limonoids from the Fijian medicinal plant dabi (*Xylocarpus)* 8943
Amat M. see Bosch J. 5269
Amate Y. García-Granados A. Martínez A. de Buruaga A. S. Bretón J. L. Onorato M. E. and **Arias J. M.** Biotransformation of 6β-eudesmanolides functionalized at C-3 with *Curvularia lunata* and *Rhizopus nigricans* cultures 5811
Amato J. S. see Karady S. 757
Amatore C. El Moustafid T. Rolando C. Thiébault A. and **Verpeaux J.-N.** Coupling between radical and anion in the outersphere oxidation of α-sulfonyl carbanions. Its role on the product distribution between dimeric olefin and disulfone 777
Amemiya S. see Harashima S. 2773
Amico V. see Caccamese S. 10101
Amputch M. A. and **Little R. D.** Electroreductive cyclization reactions: attempts to use 2(5H)-furanones (α,β-unsaturated butenolides). Dominance of acid-base over cyclization chemistry 383
Amri H. see Ben Ayed T. 9621
Amruta Reddy P. see Kasturi T. R. 5245
Anderson J. C. Ley S. V. Santafianos D. and **Sheppard R. N.** Chemistry of insect antifeedants from *Azadirachta indica*—VIII. Synthesis of hydroxydihydrofuran acetal fragments for biological evaluation and azadirachtin total synthesis studies 6813
Anderson J. C. see Ley S. V. 9231
Anderson J. E. Lunazzi L. 7465
Anderson J. E. see Fang X. 9751
Anderson J. E. see Saad J. M. 2751
Andreoli P. Billi L. Cainelli G. Panunzio M. Bandini E. Martelli G. and **Spunta G.** β-Lactams from ester enolates and silylimines: an enantiospecific synthesis of monocyclic β-lactams 9061
Andreu J. A. see García M. L. 10023
Angelova O. see Georgieva A. 3375
Annapurna P. see Marchand A. P. 907
Annunziata R. Cinquini M. Cozzi F. Cozzi P. G. and **Consolandi E.** Diastereoselective aldol condensation of directly generated titanium enolates of activated esters 7897
Annunziata R. Cinquini M. Cozzi F. Giaroni P. and **Benaglia M.** Diastereo- and enantioselective synthesis of 1,2-diols by vanadium(II) promoted pinacol cross coupling 5737
Annunziata R. Cinquini M. Cozzi F. Raimondi L. and **Licini G.** Regio- and stereocontrol in the intramolecular nitrile oxide cycloaddition to 2-furylthiol- and 2-furylmethanethiol derivatives 3869
Annunziata R. Cinquini M. Cozzi F. and **Fuchicello A.** Chelation and non-chelation controlled stereoselective reduction of α-methoxy-α-phenylthio ketones 3853
Anslyn E. see Breslow R. 2365
Anteunis M. see Aped P. 5781
Antipin M. Yu. see Nifantyev E. E. 9839
Anvelt J. see Martin I. 3999
Aoki S. and **Nakamura E.** Synthesis of 1,4-dicarbonyl compounds and 4-keto pimelates by palladium-catalyzed carbonylation of siloxycyclopropanes 3935
Aonuma S. see Komatsu K. 6951
Aoyama T. see Mori S. 5051
Aped P. Fuchs B. Goldberg I. Senderowitz H. Schleifer L. Tartakovsky E. Anteunis M. and **Borremans F. A. M.** Structure, conformation and stereoelectronics of 9,10-annelated-1,4,5,8-tetraoxadecalins: a multidisciplinary probe 5781
Aped P. see Müller R. 1013
Aplin R. T. see Baldwin J. E. 9881
Aquino M. Cardani S. Fronza G. Fuganti C. Fernandez R. P. and **Tagliani A.** Baker's yeast reduction of arylalkyl and

arylalkenil γ- and δ-keto acids 7887
Arai M. see Kajiyama S. 5453
Arai M. see Shiozaki M. 7021
Araki K. see Iwamoto K. 4325
Araki K. see Iwamoto K. 7197
Aramaki Y. see Teshima T. 3305
Aranda G. El Kortbi M. S. Lallemand J.-Y. Neuman A. Hammoumi A. Facon I. and **Azerad R.** Microbial transformation of diterpenes: hydroxylation of sclareol manool and derivatives by *Mucor plumbeus* 8339
Arcadi A. Bernocchi E. Cacchi S. and **Marinelli F.** β-Vinyl-γ-butyrolactones via the palladium-catalysed reaction of vinyl triflates with Z-2-buten-1,4-diol 1525
Arcamone F. see García M. L. 10023
Archelas A. see Vigne B. 1447
Archer S. see Modi S. P. 6539
Arduini A. see Casnati A. 2221
Aresta M. and **Quaranta E.** Mechanistic studies on the role of carbon dioxide in the synthesis of methylcarbamates from amines and dimethylcarbonate in the presence of CO_2 9489
Arias J. M. see Amate Y. 5811
Arias J. M. see García-Granados 91
Arif A. M. see Stang P. J. 4539
Arihara S. see Kakuno T. 7219
Armstrong P. Grigg R. Heaney F. Surendrakumar S. and **Warnock W. J.** X=Y–ZH Systems as potential 1,3-dipoles—XXXIII. Generation of nitrones from oximes. Tandem Michael addition-1,3-dipolar cycloaddition reactions. Class 2 processes in which the dipolarophile is located within the oxime 4495
Arnó M. see Abad A. 3829
Arnold W. see Martens J. 7029
Arnone A. see Cavicchio G. 9439
Arnot K. I. see Prowse W. G. 1095
Arséniyadis S. Rodriguez R. Cabrera E. Thompson A. and **Ourisson G.** Synthetic approaches to pentacyclic triterpenes of the arborane family 7045
Asaoka M. Hayashibe S. Sonoda S. and **Takei H.** New route to (–)- frontailin and (–)-malyngolide via epoxyketone rearrangement 6967
Ashworth P. Belagali S. L. Casson S. Marczak A. and **Kocienski P.** A method for the chromatographic resolution of tetrahydropyran-2-ones 9939
Atta-ur-Rahman Nighat F. Nelofer A. Zaman K. Choudhary M. I. and **DeSilva K. T. D.** Macroxine—a novel oxindole alkaloid from *Alstonia macrophylla* 3129
Aubert T. Farnier M. and **Guilard R.** Reactivity of iminophosphoranes towards some symmetrical dicarbonyl dichlorides: syntheses and mechanisms 53
Aurell M. J. Gil S. Parra M. Tortajada A. and **Mestres R.** Iodine oxidative coupling of diene and triene-diolates of unsaturated carboxylic acids 1997
Avendaño C. see Marcos A. 7459
Avignon-Tropis M. Treilhou M. Pougny J. R. Fréchard-Ortuno I. and **Linstrumelle G.** Total synthesis of (+)-leukotriene B_4 methyl ester and its 5-epimer from (R)-glycidol 7279
Ayafor J. F. see Ngadjui B. T. 3555
Ayer W. A. see Browne L. M. 3909
Ayyangar N. R. see Zubaidha P. K. 5759
Azerad R. see Aranda G. 8339
Baczko K. and **Plusquellec D.** Sugar chemistry without protecting groups—III. A facile chemical synthesis of 6-O-acyl-D-glycopyranoses and methyl-6-O-acyl-D-glycopyranosides 3817
Baczynskyj L. see Gnabre J. N. 3545
Baeckström P. and **Li L.** Isoprenoid chain elongations by Claisen rearrangements using acetals as precursors of vinyl ethers 6521
Baeckström P. and **Li L.** Syntheses of all-*trans* acyclic isoprenoid pheromone components 6533
Baggaley K. H. see Baldwin J. E. 4089
Bailey W. F. and **Khanolkar A. D.** Construction of a sterically congested carbon framework via 5-hexenyllithium cyclization. Synthesis of (±)-cuparene 7727
Bain J. D. Wacker D. A. Kuo E. E. and **Chamberlin A. R.** Site-specific incorporation of non-natural residues into peptides: effect of residue structure on suppression and translation efficiencies 2389
Baker G. R. Billington D. C. and **Gani D.** Synthesis of D- and L-*myo*-inositol 1-phosphorothioate, substrates for inositol monophosphatase 3895
Baker P. J. see Sanson D. R. 3633
Baker R. see Vacca J. P. 907
Baker R. W. Knox J. R. Skelton B. W. and **White A. H.** Structural parallels between the cardiotonic steroids and the *Erythrophleum* alkaloids—II. Synthesis and Na^+,K^+-ATPase inhibitory activity of novel *Erythrophleum* alkaloid analogues 7965
Baker R. W. Knox J. R. and **Rogers C. H.** Structural parallels between the cardiotonic steroids and the *Erythrophleum alkaloids*—I. Synthesis of phenanthrenone precursors to novel *Erythrophleum* alkaloid analogues 7951
Balázs M. see Szántay, Jr. C. 1265
Baldwin J. E. Adlington R. M. Bryans J. S. Bringhen A. O. Coates J. B. Crouch N. P. Lloyd M. D. Schofield C. J. Elson S. W. Baggaley K. H. Cassels R. and **Nicholson N.** Isolation of dihydroclavaminic acid, an intermediate in the biosynthesis of clavulanic acid 4089
Baldwin J. E. Adlington R. M. Crouch N. P. Schofield C. J. Turner N. J. and **Aplin R. T.** Cephalosporin biosynthesis: a branched pathway sensitive to an isotope effect 9881
Baldwin J. E. Adlington R. M. Godfrey C. R. A. Gollins D. W. and **Schofield C. J.** The stereospecific synthesis of alahopcin 5835
Baldwin J. E. Adlington R. M. Mitchell M. B. and **Robertson J.** Intramolecular S_H2' macrocyclisations 5901
Baldwin J. E. Adlington R. M. and **Robertson J.** Carbocyclic ring expansion reactions via radical chain processes—II 6795
Baldwin J. E. Blackburn J. M. Sutherland J. D. and **Wright M. C.** High-level soluble expression of isopenicillin N synthase isozymes in *E. coli* 5991
Baldwin J. E. Bradley M. Abbott S. D. and **Adlington R. M.** New penicillins from isopenicillin N synthase 5309
Baldwin J. E. Bradley M. Adlington R. M. Norris W. J. and **Turner N. J.** Further evidence for the involvement of a moncyclic β-lactam in the enzymatic conversion of δ-L-α-aminoadipoyl-L-cysteinyl-D-valine into isopenicillin N 457
Baldwin J. E. Bradley M. Turner N. J. Adlington R. M. Pitt A. R. and **Sheridan H.**

Synthesis of δ-L-α-aminoadipoyl-L-cysteinyl-D-allylglycine, and eight deuterated analogues, substrates for the investigation of the mechanism of action of isopenicillin N synthase 8203
Baldwin J. E. Bradley M. Turner N. J. Adlington R. M. Pitt A. R. and **Derome A. E.** Enzymic conversion of deuterated analogues of δ-L-α-aminoadipoyl-L-cysteinyl-D-allylglycine, an unnatural substrate for isopenicillin N synthase: a unified theory of second ring closure 8223
Baldwin J. E. Jesudason C. D. Moloney M. G. Morgan D. R. and **Pratt A. J.** The synthesis of substituted aryl diazirines. A bifunctional reagent suitable for application to photoaffinity labelling studies 5603
Baldwin J. E. Moloney M. G. and **Parsons A. F.** Enantioselective synthesis of kainoid analogues by cobalt-mediated cyclisations 155
Balenkova E. S. see Gridnev I. D. 5577
Ballesteros R. see Abarca B. 5277
Balme G. see Fournet G. 6293
Baltork I. M. see Iranpoor N. 9861
Balu M. P. see Rao Ch. S. 3499
Banba Y. see Takahata H. 7635
Bandini E. see Andreoli P. 9061
Banerjee A. K. Acevedo J. C. González R. and **Rojas A.** Acid induced rearrangement of β,γ-unsaturated ketones 2081
Banerjee A. K. Acevedo J. C. González R. and **Rojas A.** Corrigendum 5641
Bannai K. see Tanaka T. 1861
Barbarella G. Bongini A. Bonini B. F. Zambianchi M. and **Zani P.** Conformation and configurational assignment of *cis* and *trans* 3,4-dimethyl-6-*t*-butyl-5,6-dihydro-2*H*-thiopyran-S-oxides and S-methyl cations 7677
Barbry D. Spanneut D. Hasiak B. and **Couturier D.** Study of the reaction of sodium amide in liquid ammonia with hexahydro-(1*H*)-2-benzazoninium salts: access to 2-aza-(7)-metacyclophanes 47
Bardella F. see Fernandez-Forner D. 8917
Baret P. see Moneta W. 1425
Barluenga J. Llavona L. Yus M. and **Concellón J. M.** Reactivity of *in situ* generated dihalomethyllithium towards dicarboxylic acid diesters and lactones: synthetic applications 7875
Barrero A. F. Quintana R. M. and **Altarejos J. C.** Biomimetic synthesis of 12-oxy-pimaranes from 12,13-epoxy-labdadienes 4441
Barton D. H. R. Blundell P. Dorchak J. Jang D. O. and **Jaszberenyi J. Cs.** The invention of radical reactions—XXI. Simple methods for the radical deoxygenation of primary alcohols 8969
Barton D. H. R. Boivin J. Crépon E. Sarma J. Togo H. and **Zard S. Z.** Decarboxylative radical addition to vinylsulphones and vinylphosphonium bromide: some further novel transformations of geminal (pyridine-2-thiyl) phenylsulphones 7091
Barton D. H. R. Csuhai E. Doller D. and **Geletii Y. V.** The functionalization of saturated hydrocarbons—XIX. Oxidation of alkanes by H_2O_2 in pyridine catalyzed by copper(II) complexes. A Gif type reaction 6561
Barton D. H. R. Géro S. D. Quiclet-Sire B. Samadi M. and **Vincent C.** Synthesis of 5',8-cyclopurine and of 5',6-cyclodihydropyrimidine nucleosides using intramolecular radical cyclisation based on the aryl telluride radical exchange process 9383
Barton D. H. R. Jaszberenyi J. Cs. and **Theodorakis E. A.** O-Sulfinylation of alcohols with methanesulfonyl cyanide or *p*-toluenesulfonyl cyanide 9167
Barton D. H. R. Okano T. and **Parekh S. I.** On the reactions of benzeneseleninic anhydride with monosubstituted hydrazones. Evidence for radical pathways 1823
Barton D. H. R. see France C. J. 6381
Barton D. H. R. Chen C. and **Wall G. M.** Synthesis of disulfides via sulfenylation of alkyl and aryldithiopyridine N-oxides 6127
Barua N. C. see Sarmah B. K. 8587
Baruah J. B. and **Samuelson A. G.** Allylic amination promoted by copper 9449
Basak A. see Townsend C. A. 2591
Basak M. see Majumder P. L. 8601
Bastard J. Do Khac D. Fetizon M. Prevost C. and **Beloeil J.-C.** Mechanism of the rearrangement of the bicyclo [4.2.0] octan system to the bicyclo [3.2.1] octan system 229
Bates F. X. Donnelly J. A. and **Keegan J. R.** The Friedel-Crafts reaction of acid chlorides with ethene; di-addition and molecular rearrangement 4991
Bates R. B. see Gnabre J. N. 3545
Bates R. W. Fernández-Moro R. and **Ley S. V.** The use of π-allyltricarbonyliron lactone complexes in the synthesis of the β-lactone esterase inhibitor (–)-valilactone 9929
Batta G. see Kovács L. 5539
Batta G. see Kovács L. 5549
Batta Gy. and **Kövér K. E.** Easy implementation of homonuclear 1-D correlation NMR techniques. Application to oligosaccharides 3535
Battersby A. R. see Crockett N. 6003
Baud M.-V. Chavis C. Lucas M. and **Imbach J.-L.** $SnCl_4$ versus $TiCl_4$-mediated coupling between N-6-benzoyladenine and perbenzoylated 2-deoxypyranose: application to the synthesis of certain homochiral acyclo and carboacyclonucleosides 9993
Baudin J.-B. Bkouche-Waksman I. Hareau G. Julia S. A. Lorne R. and **Pascard C.** Diastereoselectivity in the [2,3]-sigmatropic rearrangement of substituted allylic N,N-dialkylamidosulfoxylates. X-Ray molecular structure of [(1')*S**, (S)*S**]-(2'*E*)-4-[[3'-(4"-bromophenyl)-1'-methyl-2'-propenyl]sulfinyl]-morpholine 6655
Baudin J.-B. Bkouche-Waksman I. Julia S. A. Pascard C. and **Wang Y.** Stereochemical course of the [2,3]-sigmatropic rearrangement of substituted propargyl *N,N*-dialkylamidosulfoxylates. X-Ray molecular structure of [S^*,(S)R^*]-4-[(1,4,4-trimethyl-1,2-pentadienyl)sulfinyl]-morpholine 3353
Baudouy R. and **Sancho M.-R.** Synthèse stéréosélective de la phéromone sexuelle 'd'Aonidiella Citrina' le (3*S*,5*E*)-(–)-3,9-diméthyle-6-isopropyle déca-5,8-diene-1-yle acétate 10015
Bauer L. see Chrusciel R. A. 8831
Baumann K. see Nussbaumer P. 4591
Bawa A. see Vankar Y. D. 2027
Bawa A. see Vankar Y. D. 8883

Bayer E. see Willisch H. 3947
Bean M. F. see Chen Y. 4869
Beaton G. Brill W. K.-D. Grandas A. Ma Y.-X. Nielsen J. Yau E. and **Caruthers M. H.** Synthesis of oligonucleotide phosphorodithioates 2377
Beck A. Heissler D. and **Duportail G.** Synthesis of fluorescent probes for localized membrane fluidity measurements 1459
Beck F. see Ye S. 5463
Beck F. Wermeckes B. and **Janßen W.** Anodic oxidation of isoalkylethers in aqueous electrolytes 725
Beckwith A. L. J. Bowry V. W. and **Schiesser C. H.** Ring closure of the 6-methylenecyclodecyl radical 121
Begley M. J. Housden N. Johns A. and **Murphy J. A.** Intramolecular reactions of allyloxy radicals featuring six-centred transition states; regiochemistry and stereochemistry 8417
Bégué J.-P. and **Bonnet-Delpon D.** Preparation of trifluoromethyl ketones and related fluorinated ketones 3207
Behrendt M. see Vankar Y. D. 9985
Beisswenger R. see Rieker A. 645
Bel P. see Breuer E. 1257
Belagali S. L. see Ashworth P. 9939
Belen'kii L. I. Brokhovetskii D. B. and **Krayushkin M. M.** Reductive condensation of trichloromethylarenes with hydroxylamine and hydrazines in pyridine 447
Belen'kii L. I. see Yakubov A. P. 5237
Bell M. R. see Kumar V. 5099
Bellandi P. see Dell'Erba C. 333
Bellur N. S. see Sonawane H. R. 8259
Beloeil J.-C. see Bastard J. 229
Belzecki C. see Panfil I. 10087
Ben Ayed T. Amri H. and **El Gaied M. M.** Addition of bromine to β'-(functional alkyl) α,β-unsaturated esters; stereoselective synthesis of β-haloderivatives 9621
Benaglia M. see Annunziata R. 5737
Benalil A. Carboni B. and **Vaultier M.** Synthesis of 1,2-aminoazides. Conversion of unsymmetrical vicinal diamines by catalytic hydrogenation or reductive alkylation with dichloroboranes 8177
Benkovic S. J. see Inglese J. 2351
Benkovik S. J. see Janda K. D. 2503
Bennasar M.-L. Zulaica E. Bonjoch J. and **Bosch J.** Studies on the synthesis of the indole alkaloids ngouniensine and epingouniensine 5507
Benoit R. see Levacher V. 429
Benson D. R. Valentekovich R. Knobler C. B. and **Diederich F.** Porphyrin-cyclophanes: inclusion complexation and X-ray crystal structure of a zinc octamethyldiphenylporphyrin 2401
Benzies D. W. M. see Marson C. M. 5491
Berg J.-E. Laaksonen A. and **Wahlberg I.** Conformational analysis of a 7,8-epoxycembranoid 9915
Bergdahl M. Nilsson M. Olsson T. and **Stern K.** Highly diastereoselective additions of organocopper reagents to 2-*exo*-bornyl crotonates 9691
Berlage U. see Samson E. 1411
Berlin W. K. Zhang W.-S. and **Shen T. Y.** Glycosyl-inositol derivatives—II. Synthesis of hexosamine-inositol-phosphates related to putative insulin mediators 1
Bernardi A. Capelli A. M. Comotti A. Gennari C. Gardner M. Goodman J. M. and **Paterson I.** Origins of stereoselectivity in chiral boron enolate aldol reactions: a computational study using transition state modelling 3471
Bernardi A. Carugo O. Pasquarello A. Sidjimov A. and **Poli G.** Asymmetric hydrogenation of 3-methyl-fumaric and maleic ester monoaldehydes protected as NEPH-derived oxazolidines 7357
Bernardi A. Cavicchioli M. Poli G. Scolastico C. and **Sidjimov A.** Highly stereoselective acetylations via norephedrine derived oxazolidines 7925
Bernát J. Kniežo L. Birošová G. Imrich J. Podlaha J. Budešínsky M. Novák J. and **Liptaj T.** Simple preparation of epimeric 2,6-dimethyl-4-(N'-substituted thioureido)-1,3-dioxanes and crystal structure of *rel*-2*S*,4*S*,6*S*-2,6-dimethyl-4-(N'-benzylthioureido)-1,3-dioxane 4665
Bernáth G. see Fülöp F. 7673
Bernáth G. see Pihlaja K. 4031
Bernaus C. Font J. and **de March P.** Synthesis of 2*H*,4*H*,9b*H*-furo[3,2-*c*][1]benzopyrans by a new intramolecular cycloaddition of a carbonyl ylide to an acetylene 7713
Bernocchi E. see Arcadi A. 1525
Berrier C. Bonnaud B. Patoiseau J. F. and **Bigg D.** Régio- et stéréo-réactivité d'une lactone dissymétrique. Détermination de structure par effets nucléaires Overhauser et modélisation moléculaire 9629
Berrier C. Jouannetaud M.-P. Jacquesy J.-C. and **Kigabo F.** A novel efficient route to hexahydrodibenzofuran derivatives 6681
Berry D. E. see Carte' B. K. 1815
Bertho C. see Alexandre C. 5481
Besidsky Y. see Glemarec C. 6689
Beslin P. et **Perrio S.** Formation stéréocontrôlée de deux centres chiraux contigus par thioréarrangement de Claisen d'α-hydroxydithioacétals de cétène S-allylés 6275
Bessard Y. see Bessiere Y. 4355
Bessard Y. and **Schlosser M.** Catalytic hydrogenolysis of cyclopropanes: metal insertion into a saturated carbon-carbon bond as the key step 1231
Bessard Y. and **Schlosser M.** *gem*-Difluorocyclopropenes by [1+2] cycloaddition reactions between difluorocarbene and acetylenes having terminal or internal triple bonds 7323
Bessiere Y. Bessard Y. Kotani T. and **Schlosser M.** In the blind spot of diffusion control: 2-fluoroallyl cations and their various possibilities for stabilization 4355
Bhalerao U. T. see Pandey G. 1745
Bhandari A. see Gurjar M. K. 7117
Bhanu M. N. see Gurjar M. K. 7117
Bhat L. Thomas A. Ila H. and **Junjappa** Studies on lead tetraacetate oxidation of α-oxoketene dithioacetals 305
Bhatia B. see Iqbal J. 6457
Bhupathy M. see McCullough D. W. 9727
Bibb M. J. see Sherman D. H. 6029
Bienfait B. Coppe-Motte G. Merényi R. Viehe H. G. Sicking W. and **Sustmann R.** β-Cyanocyclobutenone as a highly reactive dienophile in comparison to β-cyanocyclopentenone 8167
Bieniek A. see Epsztajn J. 1697
Bieräugel H. see Huizenga R. H. 4165
Biernat J. F. see Luboch E. 4101
Bigg D. see Berrier C. 9629

Billi L. see Andreoli P. 9061
Billington D. C. see Baker G. R. 3895
Billington D. C. see Vacca J. P. 907
Billington S. Mann J. Quazi P. Alexander R. Eaton M. A. W. Millar K. and **Millican A.** The synthesis of novel bifunctional linker molecules 5231
Bills G. F. see Singh S. B. 6931
Bina M. see Boger D. L. 2661
Birošová G. see Bernát J. 4665
Bisseret P. see Stampf P. 7081
Bit R. A. Davis P. D. Hill C. H. Keech E. and **Vesey D. R.** A Dieckmann/ring expansion approach to tetrahydropyrido- and tetrahydroazepino-[1,2-*a*]indoles 4645
Bkouche-Waksman I. see Baudin J.-B. 3353
Bkouche-Waksman I. see Baudin J.-B. 6655
Blackburn J. M. see Baldwin J. E. 5991
Blake A. J. see Ramage R. 6353
Blake A. J. see Ramage R. 8001
Blanchfield J. T. see DeVoss J. J. 1985
Blanco L. see Magot-Cuvru A. 8331
Blaney W. M. see Ley S. V. 9231
Blundell P. see Barton D. H. R. 8969
Blunt J. W. see Gustafson K. R. 4547
Bodnár Zs. see Mallát T. 441
Bodo B. see Borgschulte K. 8351
Bodor N. see Brewster M. E. 7525
Bodwell G. J. Davies S. G. and **Mortlock A. A.** A study of the aldol reaction between enolates derived from the iron acetyl complex $[(\eta^5\text{-}C_5H_5)Fe(CO)(PPh_3)COCH_3]$ and 2,3-O-isopropylidene-D-glyceraldehyde 10077
Boehler M. A. and **Konopelski J. P.** Enantiomerically pure vinylketene acetals in the Diels-Alder reaction Catalysis and facial selectivity 4519
Boeker J. L. see Glass R. S. 5077
Boeykens M. see De Kimpe N. 3389
Bogdanov V. S. see Yakubov A. P. 5237
Boger D. L. Munk S. A. Zarrinmayeh H. Ishizaki T. Haught J. and **Bina M.** An alternative and convenient strategy for generation of substantial quantities of singly 5'-^{32}P-end-labeled double-stranded DNA for binding studies: development of a protocol for examination of functional features of (+)-CC-1065 and the duocarmycins that contribute to their sequence-selective DNA alkylation properties 2661
Böhmer V. see Zetta L. 1911
Bois C. see Alonso D. 5895
Boivin J. see Barton D. H. R. 7091
Bojack G. and **Bornowski H.** First synthesis of the difuransesquiterpene athanasin and the elucidation of its relative and absolute configuration 9179
Bölcskei H. see Szántay, Jr. C. 1265
Bolognese A. Diurno M. V. Mazzoni O. and **Giordano F.** On the azetidin-2-one ring formation. A ^{1}H NMR investigation 7417
Bolós J. see Rubiralta M. 5585
Bongini A. see Barbarella G. 7677
Bonham N. M. see Page P. C. B. 2871
Bonini B. F. see Barbarella G. 7677
Bonjoch J. Quirante J. Solé D. Castells J. Galceran M. and **Bosch J.** 8-Aryl-2-azabicyclo[3.3.1]nonan-7-ones. Synthesis and retro-Michael ring opening 4417
Bonjoch J. see Bennasar M.-L. 5507
Bonjouklian R. Smitka T. A. Doolin L. E. Molloy R. M. Debono M. Shaffer S. A. Moore R. E. Stewart J. B. and **Patterson G. M. L.** Tjipanazoles, new antifungal agents from the blue-green alga *Tolypothrix tjipanasensis* 7739
Bonnaud B. see Berrier C. 9629
Bonnet-Delpon D. see Bégué J.-P. 3207
Bordas E. see Fullas F. 8515
Borgschulte K. Rebuffat S. Trowitzsch-Kienast W. Schomburg D. Pinon J. and **Bodo B.** Isolation and structure elucidation of hymatoxins B–E and other phytotoxins from *Hypoxylon mammatum* fungal pathogen of Leuce poplars 8351
Bornowski H. see Bojack G. 9179
Borodkin V. S. see Sviridov A. F. 2291
Borodkin V. S. see Sviridov A. F. 2317
Borràs L. see García M. L. 10023
Borremans F. A. M. see Aped P. 5781
Bory S. see Dubois J. 1001
Bosch J. Salas M. Amat M. Alvarez M. Morgó I. and **Adrover B.** Studies on the synthesis of *Strychnos* indole alkaloids 5269
Bosch J. see Bennasar M.-L. 5507
Bosch J. see Bonjoch J. 4417
Bosch J. see Valls N. 1065
Boschelli D. see Chen B.-C. 173
Bose A. K. Womelsdorf J. F. Krishnan L. Urbanczyk-Lipkowska Z. Shelly D. C. and **Manhas M. S.** Diastereoselective synthesis of bis-beta-lactams 5379
Boska I. M. see Esch P. M. 4039
Boska I. M. see Esch P. M. 4063
Bossert H. see Schlosser M. 6287
Botta M. see Gambacorta A. 9097
Bourgin D. see Zhang C. 3059
Bourguignon J. see Combret Y. 9369
Bourguignon J. see Levacher V. 429
Bourne G. T. Horwell D. C. and **Pritchard M. C.** Synthesis of an α-CH_2CO_2H functionalized tryptophan and its incorporation into an analogue of cholecystokinin 4763
Bouzide A. see Cossy J. 7775
Bovicelli P. see Gambacorta A. 9097
Bowman W. R. Heaney H. and **Jordan B. M.** Oxidation during reductive cyclisations using Bu_3SnH 10119
Bowry V. W. see Beckwith A. L. J. 121
Boyd M. R. see Gustafson K. R. 4547
Boyle P. H. Hughes E. M. and **Khattab H. A.** Synthesis of a 2,4-diaminodihydrohomopteridine, 6-acetyl-2,4-diamino-7,8-dihydro-9*H*-pyrimido[4,5-*b*][1,4]diazepine, using a furazano[3,4-*d*]pyrimidine precursor 5259
Bracher D. see Kutchan T. M. 5945
Bradley M. see Baldwin J. E. 457
Bradley M. see Baldwin J. E. 5309
Bradley M. see Baldwin J. E. 8203
Bradley M. see Baldwin J. E. 8223
Bradshaw J. S. see Olsher U. 2947
Braekman J. C. see Merlin P. 3805
Branchadell V. Font J. Oliva A. Ortí J. Ortuño R. M. Rafel S. Terris N. and **Ventura M.** 5-Ylidene-2(5*H*)-furanones as dienophiles in Diels-Alder cycloadditions: effect of the substituents on the site-selectivity 8775
Brandi A. see Pietrusiewicz K. M. 9083
Brands K. M. J. Meekel A. A. P. and **Pandit U. K.** Synthesis of

the homochiral 'tricyclic heart' of manzamine A 2005
Brandsma L. see Klusener P. A. A. 2041
Brassard P. see Caron B. 4287
Braun H. Felber H. Kreße G. Ritter A. Schmidtchen F. P. and **Schneider A.** Asymmetric synthesis of primary amines from alkenes and chiral chloronitroso sugar derivatives 3313
Braun H. Schmidtchen F. P. Schneider A. and **Simon H.** Microbial reduction of N-allylhydroxylamines to N-allylamines using clostridia 3329
Bravo P. see Cavicchio G. 9439
Breslow R. Anslyn E. and **Huang D.-L.** Ribonuclease mimics 2365
Bretón J. L. see Amate Y. 5811
Breuer E. Safadi M. Chorev M. Vincze A. and **Bel P.** Synthesis and characterization of amino protected peptides derived from amino-α-hydroxyiminophosphonates 1257
Brewster M. E. Doerge D. R. Huang M.-J. Kaminski J. J. Pop E. and **Bodor N.** Application of semiempirical molecular orbital techniques to the study of peroxidase-mediated oxidation of phenols, anilines, sulfides and thiobenzamides 7525
Brieva R. see Gotor V. 9207
Brill W. K.-D. see Beaton G. 2377
Brinen L. S. see Gustafson K. R. 4547
Bringhen A. O. see Baldwin J. E. 4089
Brito I. see Norte M. 9411
Brodey C. L. see Mortishire-Smith R. J. 3645
Broeker J. L. see Glass R. S. 5087
Brokhovetskii D. B. see Belen'kii L. I. 447
Brown A. M. see Equi A. M. 507
Brown D. S. Charreau P. Hansson T. and **Ley S. V.** Substitution reactions of 2-phenylsulphonyl-piperidines and -pyrrolidines with carbon nucleophiles: synthesis of the pyrrolidine alkaloids Norruspoline and Ruspolinone 1311
Brown D. S. Ley S. V. Vile S. and **Thompson M.** Use of 2-phenylsulphonyl cyclic ethers in the preparation of tetrahydropyran and tetrahydrofuran acetals and in some glycosidation reactions 1329
Brown D. W. Graupner P. R. Sainsbury M. and **Shertzer H. G.** New antioxidants incorporating indole and indoline chromophores 4383
Browne L. M. Conn K. L. Ayer W. A. and **Tewari J. P.** The camalexins: new phytoalexins produced in the leaves of *Camelina sativa* (Cruciferae) 3909
Bruce I. see Fairbanks A. J. 131
Bruice T. C. see Schnatter W. F. K. 8687
Bruno M. see de la Torre M. C. 3463
Bryans J. S. see Baldwin J. E. 4089
Budešínsky M. see Bernát J. 4665
Buet V. see Plavec J. 5847
Bull J. R. and **Steer L. M.** Chemoselective reactions of 14,17α-bis(hydroxymethyl)-3-methoxyestra-1,3,5(10)-trien-17β-ol. Synthesis of novel 14,17-hetero-bridged 19-norsteroids 7377
Burdisso M. Gandolfi R. Toma L. and **Oberti R.** Hexafluoroisopropanol as a suitable solvent for rearrangements via zwitterionic intermediates 6725
Burdisso M. and **Gandolfi R.** Diastereofacial selectivity in 1,3-dipolar cycloadditions. Reactions of diazomethane with *endo, cis*-5,6-disubstituted bicyclo[2.2.2]oct-2-enes 7699
Burgess H. and **Donnelly J. A.** The reactions of halogenated phenylnitromethanes with triethyl phosphite 111
Burgess K. and **Henderson I.** Stereochemically matched sulfinylacetates for double diastereoselection in the SPAC reaction 6601
Burguete M. I. see Luis S. V. 1737
Burinsky D. J. see Oyler A. R. 6549
Burks S. J. see Allison S. 9737
Burmistrov S. Yu. see Nifantyev E. E. 9839
Buser H. P. Pugin B. Spindler F. and **Sutter M.** Two enantioselective syntheses of a precursor of the biologically most active isomer of CGA 80000 (clozylacon) 5709
Busetti V. see Cevasco G. 7353
Butsugan Y. see Kawai M. 2103
Butz V. see Vilsmaier E. 8133
Byun Y.-S. and **Lightner D. A.** Long-range exciton coupling from dipyrrinone chromophores 9759
Caballero E. see Feliciano A. S. 6503
Cabiddu S. Contini L. Fattuoni C. Floris C. and **Gelli G.** Metalation reactions—XVI. Polylithiation of 1,3,5- and 1,2,4-trimethoxybenzene 9279
Cabrera E. see Arséniyadis S. 7045
Caccamese S. Amico V. Neri P. and **Foti M.** The structure of laurobtusol, a new rearranged sesquiterpenoid from the Mediterranean red alga *Laurencia obtusa* 10101
Cacchi S. see Arcadi A. 1525
Cainelli G. see Andreoli P. 9061
Calabrese D. see Rossi E. 5819
Camarasa M. J. see Huss S. 1727
Canepa C. Cobianco S. Degani I. Gatti A. and **Venturello P.** Effect of the cation in the regioselectivity control in reactions of 3,3-dichloroallyl metals with substituted benzaldehydes 1485
Canepa C. Tonachini G. and **Venturello P.** Regioselectivity in lithium, sodium and potassium chloroallyl systems. An *ab initio*-theoretical and experimental study 8739
Capelli A. M. see Bernardi A. 3471
Capozzi G. Gori L. and **Menichetti S.** Phthalimidosulphenyl chloride—II. Synthesis of unusual thiirane derivatives 7185
Caputo R. Ferreri C. Palumbo G. and **Russo F.** Reactivity of ethanediyl *S,S*-acetals—III. Ring aromatization in cyclohexanone derivatives: a novelty synthesis of 1,4-benzodithians 4187
Carboni B. see Benalil A. 8177
Cardani S. see Aquino M. 7887
Cardellina, II, J. H. see Gustafson K. R. 4547
Cárdenas J. see del Carmen Fernández M. 7199
Cardillo G. Orena M. Penna M. Sandri S. and **Tomasini C.** A new approach to the synthesis of enantiomerically pure 2,3-diaminoacids through chiral imidazolidin-2-ones 2263
Carey J. J. see Modi S. P. 6539
Carganico G. see García M. L. 10023
Cariou M. Anodic oxidation of diarylacetylenes and diaryldiacetylenes: electrosynthesis of diaroyl-stilbenes and acetylenic α- and γ-diketones 799
Carmeli S. Moore R. E. and **Patterson G. M. L.**

Mirabimides A-D, new N-acylpyrrolinones from the blue-green alga *Scytonema mirabile* 2087
Carmeli S. see Mori Y. 4889
Carmen Carreño M. Domínguez E. García Ruano J. L. Pedregal C. and **Rodríguez J. H.** Synthesis and hydride reductions of chiral cyclic β-iminosulfoxides 10035
Caron B. and **Brassard P.** Regiospecific α-substitution of crotonic esters. Synthesis of naturally occurring derivatives of 6-ethyljuglone 4287
Carpita A. see Rossi R. 8443
Carr S. see Carte' B. K. 1815
Carreño M. C. García Ruano J. L. Mata J. M. and **Urbano A.** General synthesis of chiral 2-*p*-tolylsulfinylquinones 605
Carrie R. see Titouani S. L. 1665
Carrié R. see Abbari M. 71
Carrillo L. see Domínguez E. 9253
Carté B. K. see Chen Y. 4869
Carte' B. K. Carr S. DeBrosse C. Hemling M. E. MacKenzie L. Offen P. and **Berry D. E.** Aciculatin, a novel flavone-C-glycoside with DNA binding activity from *Chrysopogon aciculatis* 1815
Carter B. J. Reddy K. S. and **Hecht S. M.** Polynucleotide recognition and strand scission by Fe-bleomycin 2463
Cartier D. see Laronze J. Y. 10003
Carugo O. see Bernardi A. 7357
Caruthers M. H. see Beaton G. 2377
Casarini D. see Lunazzi L. 7465
Casas J. see Messeguer A. 1291
Casiraghi G. see Rassu G. 8025
Casnati A. Arduini A. Ghidini E. Pochini A. and **Ungaro R.** A general synthesis of calix[4]arene monoalkyl ethers 2221
Casnati A. see Groenen L. C. 8379
Cassels R. see Baldwin J. E. 4089
Casson S. see Ashworth P. 9939
Castedo L. see Mascareñas J. L. 3485
Castells J. see Bonjoch J. 4417
Castells J. Troin Y. Diez A. Rubiralta M. Grierson D. S. and **Husson H.-P.** Synthesis and reactivity of 2-(1,3-dithian-2-yl)indoles—IV. Influence of the *N,N*-diethylcarbamoyl indole protecting group 7911
Castro R. see Rodriguez J. 4753
Castro R. see Rodriguez J. 7501
Cataldo F. see Norte M. 9411
Cavelier-Frontin F. Jacquier R. Paladino J. and **Verducci J.** N-Bis-silylation of α-amino acids: 'benzostabases' as amino protecting group 9807
Cavicchio G. Marchetti V. Arnone A. Bravo P. and **Viani F.** Intramolecular trapping of difluoroalkyl radicals by tethered olefins in the asymmetric synthesis of 2,4-disubstituted-3,3-difluorotetrahydrofurans 9439
Cavicchioli M. see Bernardi A. 7925
Ceccherelli P. Curini M. Marcotullio M. C. and **Rosati O.** On the reaction of trisubstituted olefins with phenylselenenyl chloride in methanol 4211
Ceccherelli P. Curini M. Marcotullio M. C. and **Rosati O.** Regiocontrol by the carbon–carbon double bond in the $Rh_2(OAc)_4$ mediated carbon–hydrogen insertion of α-diazo-ketones 7403
Cecchi P. Chini M. Crotti P. Pizzabiocca A. Renzi G. and **Speranza M.** Gas-phase acid-induced ring opening in diastereoisomeric 9,10-oxides derived from *trans*-1,2,3,4,4a,10a-hexahydrophenanthrene 4683
Cenci di Bello I. see Fairbanks A. J. 131
Cevasco G. Penco S. Thea S. and **Busetti V.** Cyclic tetramers from 3,5-disubstituted 4-hydroxybenzenesulfonyl chlorides. Their synthesis and characterization 7353
Chaari M. Jenhi A. Lavergne J.-P. and **Viallefont P.** Reactions of fluorobenzene tricarbonylchromium complexes with anions from Schiff bases of α-amino esters; enantioselective synthesis of α-aryl amino acids 4619
Chadwick D. J. and **Ennis D. S.** Directed metallation studies on 2-(2-heteroaryl)imidazolines: synthesis of some 2,3-disubstituted thiophenes and furans 9901
Chakraborty R. and **Simpkins N. S.** Cyclisation chemistry of some functionalised allylsilanes 7689
Chakravarty A. K. Das B. and **Mukhopadhyay S.** Peracid oxidation products of swertanone, the novel triterpene of *Swertia chirata* 2337
Chalmers A. A. see Vuorinen E. 8611
Chamberlin A. R. see Bain J. D. 2389
Chambers C. see Chen Y. 4869
Chaney G. A. see Toomey, Jr. J. E. 697
Chang C. see Fang X. 9751
Chapuzet J.-M. and **Simonet J.** The anodic trimerization of aromatic orthodiethers: new developments 791
Chardon-Noblat S. and **Sauvage J.-P.** Synthesis of bis-porphyrins containing a 2,9-diphenyl-1,10-phenanthroline spacer 5123
Charreau P. see Brown D. S. 1311
Chattopadhyay S. see Ghosh S. K. 3089
Chattopadhyaya J. see Földesi A. 7135
Chattopadhyaya J. see Glemarec C. 3417
Chattopadhyaya J. see Glemarec C. 6689
Chattopadhyaya J. see Hovinen J. 4693
Chattopadhyaya J. see Koole L. H. 3183
Chattopadhyaya J. see Plavec J. 5847
Chattopadhyaya J. see Plavec J. 7363
Chattopadhyaya J. see Sund C. 9659
Chattopadhyaya J. see Tong W. 3431
Chattopadhyaya J. see Wu J.-C. 2237
Chattopadhyaya J. see Xi Z. 9675
Chattopadhyaya J. Sund C. 6305
Chauhan B. P. S. see Iqbal J. 4143
Chavan S. P. see Zubaidha P. K. 5759
Chavis C. see Baud M.-V. 9993
Chelucci G. Conti S. Falorni M. and **Giacomelli G.** Chiral ligands containing heteroatoms—VIII. 2-[(2*S*)-2-Pyrrolidinyl]pyridine as a novel catalyst in the enantioselective addition of diethylzinc to aldehydes 8251
Chen B.-C. Weismiller M. C. Davis F. A. Boschelli D. Empfield J. R. and **Smith III A. B.** Enantioselective synthesis of (+)-kjellmanianone 173
Chen C. see Barton D. H. R. 6127
Chen D. and **Martell A. E.** The synthesis of new binucleating polyaza macrocyclic and macrobicyclic ligands: dioxygen affinities of the cobalt complexes 6895
Chen Y. Bean M. F. Chambers C. Francis T. Huddleston M. J. Offen P. Westley J. W. Carté B. K. and **Timmermann B. N.** Arrivacins, novel pseudoguaianolide esters with

potent angiotensin II binding activity from *Ambrosia psilostachya* 4869
Chen Y. see Morrow G. W. 655
Cheng M.-C. Kim K. Lin Y.-T. Plummer J. S. Talhouk J. Wang Y. You T.-P. and **Mosher H. S.** 3-Amino-2,3-dideoxy-D-*erythro*-furanose derivatives 4861
Chifundera K. Messana I. Galeffi C. and **De Vicente Y.** Research on African medicinal plants—XXV. The (1*R*,2*S*) absolute configuration of nyasicoside. Its occurrence in *Curculigo recurvata* 4369
Chini M. see Cecchi P. 4683
Chioccara F. Di Gennaro P. La Monica G. Sebastiano R. and **Rindone B.** Selective *ortho*-hydroxylation of phenols in copper(I) complexes 4429
Chippendale A. M. see Hutchings M. G. 7869
Chmielewski J. and **Schultz P.** Monoclonal antibodies with sequence specific affinity for a stem-loop structure in DNA 2563
Chmielewski M. see Panfil I. 10087
Cho W. J. see Mukai C. 3007
Cho Y. see Piotto M. E. 2449
Choi S.-C. see Dowd P. 4847
Chorev M. see Breuer E. 1257
Choudhary M. I. see Atta-ur-Rahman 3129
Christenson B. Hallnemo G. and **Ullenius C.** Stereoselective addition of R_2CuLi to *ortho*-substituted methyl cinnamates; intramolecular assistance and solvent effects 4739
Christiaens L. see Lambert C. 9053
Christiansen R. G. see Kumar V. 5099
Chrusciel R. A. Bauer L. Kaminski J. M. and **Zaneveld L. J. D.** 4-Acetamidophenyl esters and 4-acetamidoanilides of L-arginine *p*-guanidino-L-phenylalanine, L-lysine, N^2-[D-fructos-3-*O*-yl and D-glucos-3-*O*-yl]acetyl-L-lysine as potential acrosin inhibitors 8831
Chuang C.-P. The free radical cyclization reaction of 1,6-dienes with allylsulfones 5425
Chuaqui C. A. see Rodriguez H. 5681
Chuche J. see Grandjean D. 1215
Chung Y. see Hoshino T. 5925
Ciattini P. G. Morera E. Ortar G. and **Rossi S. S.** Preparative and regiochemical aspects of the palladium-catalyzed carbonylative coupling of 2-hydroxyaryl iodides with ethynylarenes 6449
Cicchi S. see Pietrusiewicz K. M. 9083
Cimino G. see Vardaro R. R. 5569
Cinquini M. Cozzi F. Cozzi P. G. and **Consolandi E.** Mild and convenient one-pot synthesis of β-lactams by condensation of titanium enolates of 2-pyridylthioesters with imines 8767
Cinquini M. see Annunziata R. 3853
Cinquini M. see Annunziata R. 3869
Cinquini M. see Annunziata R. 5737
Cinquini M. see Annunziata R. 7897
Cintas P. Asymmetric synthesis of α-amino acids from carbohydrates as chiral templates 6079
Ciofalo M. see Rossi R. 8443
Cipiciani A. and **Primieri S.** Catalysis by zwitterionic micelles in aromatic nucleophilic substitution reaction 83
Clardy J. see Gustafson K. R. 4547
Clardy J. see Stout T. J. 3511
Clarke S. J. Gilchrist T. L. Lemos A. and **Roberts T. G.** Reactions of azoalkenes derived from hydrazones of ethyl bromopyruvate with electron rich alkenes and heterocycles 5615
Clennan E. L. Synthetic and mechanistic aspects of 1,3-diene photooxidation 1343
Clerici F. Folpini E. gelmi M. L. and **Pocar D.** 5-Oxazolones—V. Reaction of 4-alkylidene-5(4*H*)-oxazolones with ethyl 3-oxo-4-triphenylphosphoranylidene-butyrate 8907
Clerici F. Pocar D. and **Rozzi A.** N-Sulfonylamidines-–III. A new rearrangement reaction of N-alkylsulfonyl-amidines: synthesis of enamines, β-aminosulfonylenamines and 4H-thiazete-S,S-dioxides 1937
Climent M. J. García H. Iborra S. Miranda M. A. and **Primo J.** Photolysis of cyclic enol esters in the presence or absence of a single electron transfer photosensitizer 9289
Clough J. M. see Mann I. S. 7981
Clough J. M. see Mann I. S. 7991
Coates J. B. see Baldwin J. E. 4089
Cobb J. E and **Johnson M. R.** Synthesis of 6-*O*-(2-aminoethyl)-D,L-*myo*-inositol-1,2-cyclic phosphate: a model of a putative insulin mediator 21
Cobianco S. see Canepa C. 1485
Coetzee M. see Martins F. J. C. 9215
Coffman H. see Williams R. M. 2629
Coffman H. R. see Street I. P. 5919
Cohen T. see McCullough D. W. 9727
Coleman J. P. Hallcher R. C. McMackins D. E. Rogers T. E. and **Wagenknecht J. H.** A practical system for maganese(III)-mediated electrochemical synthesis of sorbic acid precursors 809
Coll J. C. see Pettit G. R. 3601
Colmenares L. U. and **Liu R. S. H.** 11-Methyl-9-demethylretinal and 11-methyl-9,13-didemethyl-retinal. Effect of altered methyl substitution pattern on polyene conformation, photoisomerization and formation of visual pigment analogs 3711
Colombo D. Ronchetti F. and **Toma L.** Enzymic acylation of sugars. Rationale of the regioselective butyrylation of secondary hydroxy groups of D- and L-galacto and mannopyranosides 103
Colonna S. Gaggero N. Leone M. and **Pasta P.** Enantioselective oxidation of sulphides to sulphoxides in the presence of bovine serum albumin 8385
Combret Y. Torché J.-J. Plé N. Duflos J. Dupas G. Bourguignon J. and **Quéguiner G.** Stereoselectivity of hydrogen transfer with chiral NADH models as a function of configuration and conformation 9369
Comotti A. see Bernardi A. 3471
Compernolle F. see Loosen P. K. 9259
Compernolle F. see Meerpoel L. 10065
Concellón J. M. see Barluenga J. 7875
Conn K. L. see Browne L. M. 3909
Connolly J. D. see Ngadjui B. T. 3555
Consolandi E. see Annunziata R. 7897
Consolandi E. see Cinquini M. 8767
Conti S. see Chelucci G. 8251
Contini L. see Cabiddu S. 9279
Contreras R. see Flores-Parra A. 6903
Cook J. M. see Gupta A. K. 3665
Cooper A. see Equi A. M. 507

Coppa F. Fontana F. Minisci F. Nogueira Barbosa M. C. and **Vismara E.** Homolytic alkylation of naphthoquinone and methyl-naphthoquinone. Enthalpic, steric and polar effects 7343
Coppe-Motte G. see Bienfait B. 8167
Corda L. see Landini D. 7477
Cordell G. A. and **Kinghorn A. D.** One-dimensional proton-carbon correlations for the structure determination of natural products 3521
Corley E. G. see Karady S. 757
Cortes D. Myint S. H. and **Hocquemiller R.** Molvizarin and motrilin: two novel cytotoxic bis-tetrahydrofuranic γ-lactone acetogenins from *Annona cherimolia* 8195
Cosquer P. see Abbari M. 71
Cossy J. Bouzide A. Ibhi S. and **Aclinou P.** Formation of β-hydroxyketones from α,β-epoxyketones by photoinduced single electron transfer reactions 7775
Coste J. see Frérot E. 259
Cotter M. L. see Oyler A. R. 6549
Coustal S. see Viger A. 7309
Couturier D. see Barbry D. 47
Couty F. see Agami C. 4343
Couwenhoven C. see Nerinckx W. 9419
Cox P. A. see Gustafson K. R. 4547
Cozine M. H. see Oyler A. R. 6549
Cozzi F. see Annunziata R. 3853
Cozzi F. see Annunziata R. 3869
Cozzi F. see Annunziata R. 5737
Cozzi F. see Annunziata R. 7897
Cozzi F. see Cinquini M. 8767
Cozzi P. G. see Annunziata R. 7897
Cozzi P. G. see Cinquini M. 8767
Cragg G. M. see Gustafson K. R. 4547
Craig D. Fischer D. A. Kemal Ö. Marsh A. Plessner T. Slawin A. M. Z. and **Williams D. J.** Intramolecular Diels-Alder reactions of sulphonyl-substituted trienes 3095
Cramer K. D. see Zimmerman S. C. 2649
Cremins P. J. Hayes R. and **Wallace T. W.** Heteroannulation of 4-oxo-4*H*-1-benzopyrans (chromones) via the conjugate addition of haloalkanols in the presence of base 9431
Cremonini M. A. see Lunazzi L. 7465
Crépon E. see Barton D. H. R. 7091
Crescenzi O. Napolitano A. Prota G. and **Peter M. G.** Oxidative coupling of DOPA with resorcinol and phloroglucinol: isolation of adducts with an unusual tetrahydromethanobenzofuro[2,3-*d*]azocine skeleton 6243
Crews P. Jiménez C. and **O'Neil-Johnson M.** Using spectroscopic and database strategies to unravel structures of polycyclic bioactive marine sponge sesterterpenes 3585
Crews P. see Alvi K. A. 8943
Crews P. see Jiménez C. 2097
Crispino A. see Vardaro R. R. 5569
Crockett N. Alefounder P. R. Battersby A. R. and **Abell C.** Uroporphyrinogen III synthase: studies on its mechanism of action, molecular biology and biochemistry 6003
Crosby J. Synthesis of optically active compounds: a large scale perspective 4789
Cross S. S. see Sun H. H. 1185
Croteau R. see Wagschal K. 5933
Crotti P. see Cecchi P. 4683
Crouch N. P. see Baldwin J. E. 4089
Crouch N. P. see Baldwin J. E. 9881
Crozet M. P. see Vanelle P. 5173
Csámpai A. Körmendy K. and **Ruff F.** Chain length dependent reactivity of 2-(ω-hydroxyalkyl)-4-(ω'-hydroxyalkylamino)phthalazin-1(2H)-ones in azeotropic hydrobromic acid 4457
Csuhai E. see Barton D. H. R. 6561
Csuk R. Hu Z. Abdou M. and **Kratky C.** Samarium diiodide promoted spirolactonization of cycloalkanones 7037
Csuk R. and **Glänzer B. I.** Methylenation of aldonolactones 1655
Cudic P. Klaic B. Raza Z. Šepac D. and **Šunjic V.** Synthesis and properties of some Rh(I) catalytic complexes with dinitrogen ligands derived from 5-pyrido-1,4-benzodiazepin-4-ones 5295
Cuenoud B. and **Schepartz A.** Synthesis of N-α-Boc-N-ε-tribenzyl EDTA-L-lysine. An amino acid analogue suitable for solid phase peptide synthesis 2535
Curiale J. A. see Peakman T. M. 3779
Curiale J. A. see Peakman T. M. 8941
Curini M. see Ceccherelli P. 4211
Curini M. see Ceccherelli P. 7403
Curran D. P. Kim D. and **Ziegler C.** Iodine atom transfer addition reactions with alkynes-II. α-iodo-carbonyls 6189
Curran D. P. and **Kim D.** Iodine atom transfer addition reactions with alkynes-I. Alkyl iodides 6171
Curtis N. R. Holmes A. B. and **Looney M. G.** Studies towards the synthesis of obtusenyne. A Claisen rearrangement approach to unsaturated nine-membered lactones 7171
Cushman M. see Nagarathnam D. 5071
Cygan A. see Luboch E. 4101
Czuppon T. see Fetter J. 9393
Dabbagh H. A. Franzus B. Huang T. T.-S. and **Davis B. H.** Deuterium isotope studies of the dehydration alcohols by reaction with triphenylphosphine-tetrachloromethane 949
Dabovic M. M. see Lorenc L. B. 6389
d'Alessandro N. Mella M. Fasani E. Toma L. and **Albini A.** The photochemical reaction between 1,4-dicyanonaphthalene and benzyl ethers 5043
Dalley N. K. see Olsher U. 2947
Daloze D. see Merlin P. 3805
Dalpozzo R. Grossi L. and **Ganazzoli F.** Reaction of *t*-butylmagnesium chloride with 1,4-dinitrobenzene 1091
Daly J. W. see Tokuyama T. 5401
Daly J. W. see Tokuyama T. 5415
Danda H. Nagatomi T. Maehara A. and **Umemura T.** Preparation of optically active secondary alcohols by combination of enzymatic hydrolysis and chemical transformation 8701
D'Andrea S. V. Freeman J. P. VonVoigtlander P. F. and **Szmuszkovicz J.** Anticonvulsants related to U-54494 prepared from *cis*-1,2-and *cis*-2,3-diaminotetralin 6157
d'Angelo J. see Alonso D. 5895
Danzer M. see Fréchet D. 61
Das B. see Chakravarty A. K. 2337
da Silva Corrêa C. M. M. see Serra A. C. 9463
Date T. see Yamazaki H. 541
Daum S. J. see Kumar V. 5099
D'Auria M. Photochemical synthesis of diindolylmethanes 9225
Davies A. G. and **Schiesser C. H.** A PM3 study of the reactions of propene with singlet oxygen and other enophiles 1707
Davies S. G. see Bodwell G. J. 10077

Davies-Coleman M. T. and **Faulkner D. J.** New diterpenoic acid glycerides from the antarctic nudibranch *Austrodoris kerguelensis* 9743
Davis B. H. see Dabbagh H. A. 949
Davis F. A. see Chen B.-C. 173
Davis H. A. see Markgraf J. H. 183
Davis P. D. see Bit R. A. 4645
de Ancos B. Fariña F. Maestro M. C. Martín M. R. and **Vicioso M. M.** Pseudoesters and derivatives—XXX. Synthesis of 5-substituted furan-2-(5*H*)-ones by the regiospecific reaction of anions of enaminofuranones with electrophiles 3171
De Bernardi M. Garlaschelli L. Toma L. Vidari G. and **Vita-Finzi P.** Fungal metabolites—XXVI. The structure of saponaceolides B, C and D, new C-30 terpenoids from *Tricholoma saponaceum* 7109
de Boer R. F. see Esch P. M. 4039
de Boer R. F. see Esch P. M. 4063
de Carvalho M. Okamoto M. T. Moran P. J. S. and **Rodrigues J. A. R.** Baker's yeast reduction of α-haloacetophenones 2073
De Clercq P. J. see Nerinckx W. 9419
De Giovani W. F. see Navarro M. 851
De Giulio A. see Adinolfi M. 4435
de Groot A. see Gijsen H. J. M. 4409
De Kimpe N. see Georgieva A. 3375
De Kimpe N. Sulmon P. and **Boeykens M.** Synthesis of 2,2-dialkylcyclopropylamines from β-chloroimines and application towards the synthesis of 1-amino-2,2-dialkylcyclopropanecarboxylic acids 3389
De Kimpe N. Sulmon P. and **Stevens C.** Synthesis of 1-amino-2,2-dialkylcyclopropanecarboxylic acids from β-chloroaldimines 4723
De Kimpe N. and **Stevens C.** A convenient method for the synthesis of β-chloroamines by electrophilic reduction of α-chloroimines 3407
de la Torre M. C. Bruno M. Piozzi F. Savona G. Omar A. A. Perales A. and **Rodríguez B.** Two *neo*-clerodane diterpenoids containing an unusual 2,6-dioxabicyclo[2.2.1]heptane structural moiety 3463
de la Torre M. C. see Malakov P. Y. 10129
De las Heras F. G. see Huss S. 1727
de March P. see Bernaus C. 7713
de Nys R. see Wright A. D. 5717
de Pascual Teresa J. see Fernández Mateos A. 4375
de S. Perreira A. C. Kaplan M. A. C. Maia J. G. S. Gottlieb O. R. Nash R. J. Fleet G. Pearce L. Watkin D. J. and **Scofield A. M.** Isolation of 7a-epialexaflorine from leaves of *Alexa grandiflora* a unique pyrrolizidine amino acid with a carboxylic acid substituent at C-3 5637
de Tullio P. see Garlaschelli L. 6769
De Vicente Y. see Chifundera K. 4369
de Waard E. R. see Vega E. 4361
Debono M. see Bonjouklian R. 7739
DeBrosse C. see Carte' B. K. 1815
Debu F. see Fréchet D. 61
Dechat T. see Nussbaumer P. 4591
DeCian A. see Solladié-Cavallo A. 249
Declercq J. P. see Rousselle D. 8323
Defrancq E. Leterme A. Pelloux N. Lhomme M.-F. et **Lhomme J.** Arylamidation de la guanosine par un agent cancérogène, le 2-aminofluorène. Approche intramoléculaire 5725
Degani I. see Canepa C. 1485
Deinzer M. L. see Smith R. J. 933
del Carmen Fernández M. Esquivel B. Cárdenas J. Sánchez A. A. Toscano R. A. and **Rodríguez-Hahn L.** Clerodane and aromatic seco-clerodane diterpenoids from *Salvia rhyacophila* 7199
Dell'Erba C. Novi M. Petrillo G. Tavani C. and **Bellandi P.** Arylation of potassium 2,4-pentanedionate via $S_{RN}1$ on diazosulfides 333
Dell'Erba C. see Petrillo G. 9297
Delmond B. see Sam N. 9187
Delpuech J.-J. see Selve C. 411
Demchuk D. V. see Strelenko Y. A. 9455
Denis J. M. see Gaumont A. C. 4927
Denney D. B. and **Denney D. Z.** A reconsideration of the mechanism for the aromatic version of radical nucleophile displacement reactions 6577
Denney D. Z. see Denney D. B. 6577
Derome A. E. see Baldwin J. E. 8223
Desai H. K. see Ross S. A. 9585
Descoins C. see Tellier F. 7767
Deshmukh A. R. A. S. see Maybhate S. P. 3887
Deshmukh M. N. see Gurjar M. K. 7117
DeSilva K. T. D. see Atta-ur-Rahman 3129
Desimoni G. Faita G. and **Righetti P. P.** Solvent effect as the result of frontier molecular orbital interarction—VI. The Diels–Alder reactions of an *N*-acyl-*o*-quinone monoimide behaving as diene or dienophile 5857
Desimoni G. Fiata G. Righetti P. P. and **Tacconi G.** Lithium perchlorate catalysis of the hetero Diels–Alder reaction: a specific lithium cation effect 8399
deSolms S. J. see Vacca J. P. 907
DeVoss J. J. Jamie J. F. Blanchfield J. T. Fletcher M. T. O'Shea M. G. and **Kitching W.** Mercury(II)-mediated routes to some side-chain functionalised 1,7-dioxaspiro[5.5]undecanes. Applications of Luche–Barbier chemoselective addition to ketoaldehydes 1985
Dickens M. J. Gilday J. P. Mowlem T. J. and **Widdowson D. A.** Transition metal mediated thiation of aromatic rings 8621
Didier E. Loubinoux B. Ramos Tombo G. M. and **Rihs G.** Chemo-enzymatic synthesis of 1,2- and 1,3-amino-alcohols and their use in the enantioselective reduction of acetophenone and anti-acetophenone oxime methyl ether with borane 4941
Diederich F. see Benson D. R. 2401
Diez A. see Castells J. 7911
Di Gennaro P. see Chioccara F. 4429
Dike S. Y. Merchant J. R. and **Sapre N. Y.** A new and efficient general method for the synthesis of 2-spirobenzopyrans: first synthesis of cyclic analogues of Precocene I and related compounds 4775
Dillen J. L. M. see Vuorinen E. 8611
Di Marzo V. see Vardaro R. R. 5569
Di Nunno L. and **Scilimati A.** An efficient C_2-homologation of aromatic aldehydes via 5-hydroxyisoxazolidines 4121
Dinya Z. see Tóth G. 8119
Dittrich H. see Kutchan T. M. 5945
Diurno M. V. see Bolognese A. 7417
Doddi G. Ercolani G. and **Mencarelli P.** Synthesis and conformational aspects of

corands incorporating pyrylium, thiopyrylium and pyridine subunits 1977
Doerge D. R. see Brewster M. E. 7525
Do Khac D. see Bastard J. 229
Dolbier Jr., W. R. Lee S. K. and **Phanstiel IV, O.** The *in situ* generation and trapping of some fluorine-substituted ketenes 2065
Dolenc D. see Zupan M. 5025
Dolle F. Hetru C. Roussel J.-P. Rousseau B. Sobrio F. Luu B. and **Hoffmann J. A.** Synthesis of a tritiated 3-dehydroecdysteroid putative precursor of ecdysteroid biosynthesis in *Locusta migratoria* 7067
Dolle F. Hetru C. and **Luu B.** A new route to precursors of ecdysteroids using a regio- and stereoselective hydroboration 7059
Doller D. see Barton D. H. R. 6561
Dombrowski A. W. see Singh S. B. 6931
Domínguez E. Martínez de Marigorta E. Carrillo L. and **Fañanás R.** On the preparation and structural determination of 3-aryl-isoquinolinones 9253
Domínguez E. see Carmen Carreño M. 10035
Donnelly J. A. see Bates F. X. 4991
Donnelly J. A. see Burgess H. 111
Doolin L. E. see Bonjouklian R. 7739
Dorchak J. see Barton D. H. R. 8969
Dorrity M. J. see Grigg R. 8297
Doubek D. L. see Pettit G. R. 3601
Dougherty T. J. see Pandey R. K. 9571
do Vale M. L. C. see Serra A. C. 9463
Dowd P. and **Choi S.-C.** Free radical ring-expansion leading to novel six- and seven-membered heterocycles 4847
Drawert F. see Spraul M. H. 3037
Dreef C. E. Tuinman R. J. Lefeber A. W. M. Elie C. J. J. van der Marel G. A. and **van Boom J. H.** Synthesis of racemic 3-methylphosphonate analogues of *myo*-inositol 3,4-bis- and 1,3,4-trisphosphate 4709
Drew K. N. and **Gross P. H.** C-glycoside syntheses—II. Henry condensations of 4,6-O-alkylidene pyranoses with a 1,3-proton transfer catalyst—a route to blocked aminomethyl-*C*-glycosides 6113
Dridi S. see Laronze J. Y. 10003
Drouin J. see Magot-Cuvru A. 8331
Dubois J. Fourès C. Bory S. Falcou S. Gaudry M. and **Marquet A.** Synthesis of 5,5'-dihydroxyleucine and 4-fluoro 5,5'-dihydroxyleucinè, the reduction products of 4-carboxyglutamic and 4-carboxy-4-fluoroglutamic acids 1001
Duburs G. see Lusis V. 7429
Duddeck H. see Rys B. 1417
Duflos J. see Combret Y. 9369
Duflos J. see Levacher V. 429
Dufour M.-N. see Frérot E. 259
Dufresne C. see VanMiddlesworth F. 7563
Dunphy R. see Oyler A. R. 6549
Dupas G. see Combret Y. 9369
Dupas G. see Levacher V. 429
Duportail G. see Beck A. 1459
Dutasta J.-P. see Moneta W. 1425
Eaton M. A. W. see Billington S. 5231
Ebizuka Y. see Hakamatsuka T. 5969
Eguchi T. see Kakinuma K. 6975
Ehrlich P. P. see Williams R. M. 2629
Eid, Jr., C. N. and **Konopelski J. P.** Acylketene acetals in organic synthesis 975
Eiermann V. see Radunz H.-E. 1887
Eilenberg W. see Meurs J. H. H. 705
Eisenberg R. L. see Gould S. J. 5979
Eisenberg R. L. see Gould S. J. 7209
El Achqar A. see Tabcheh M. 4611
El Boukili R. see Laronze J. Y. 10003
El Boukili R. see Laronze J.-Y. 4915
El Gaied M. M. see Ben Ayed T. 9621
El Kortbi M. S. see Aranda G. 8339
El Moudjahid C. see Selve C. 411
El Moustafid T. see Amatore C. 777
Elghandour A. H. H. see Khalifa F. A. 8243
Elie C. J. J. see Dreef C. E. 4709
Elinson M. N. see Nikishin G. I. 895
Elson S. W. see Baldwin J. E. 4089
Empfield J. R. see Chen B.-C. 173
Emziane M. see Sutowardoyo K. I. 1435
Endo K. see Kakuno T. 7219
Enev V. St. and **Tsankova E. T.** Lewis acid catalysed rearrangement of 7,11-epoxyisogermacrone. Formation of a new carbon skeleton 6399
Engbersen J. F. J. see Ohba S. 9947
Ennis D. S. see Chadwick D. J. 9901
Epifani E. Florio S. Ingrosso G. Ronzini L. Sgarra R. and **Troisi L.** Regio- and stereo-chemistry of the coupling reaction of phenylsulphenyl-, phenylsulphinyl- and phenylsulphonyl-pentadienyl metals 7489
Epifani E. Florio S. Perrone D. and **Valle G.** On the coupling reaction of 1-benzothiazolyl-2-aza-pentadienyl metals with C-electrophiles 4465
Epifani E. see Florio S. 3365
Epsztajn J. Bieniek A. and **Kowalska J. A.** Application of organolithium and related reagents in synthesis—XI. Synthesis and metallation of 4-chloropicolin- and 2-chloroisonicotinanilides. a useful method for preparation of 2,3,4-trisubstiuted pyridines 1697
Equi A. M. Brown A. M. Cooper A. Ner S. K. Watson A. B. and **Robins D. J.** Oxidation of putrescine and cadaverine derivatives by diamine oxidases 507
Ercolani G. see Doddi G. 1977
Eritja R. Pons A. Escarceller M. Giralt E. and **Albericio F.** Synthesis of defined peptide–oligonucleotide hybrids containing a nuclear transport signal sequence 4113
Eritja R. see Fernandez-Forner D. 8917
Ermolenko M. S. see Sviridov A. F. 2291
Ermolenko M. S. see Sviridov A. F. 2317
Ernst P. S. see Markgraf J. H. 183
Escarcelier M. see Eritja R. 4113
Esch P. M. Boska I. M. de Boer R. F. Hiemstra H. and **Speckamp W. N.** tin-induced π-cyclization of glycine cation equivalents to substituted pipecolic acid tetrachloride derivatives 4039
Esch P. M. de Boer R. F. Hiemstra H. Boska I. M. and **Speckamp W. N.** Formic acid-induced π-cyclization of glycine cation equivalents to substituted pipecolic acid derivatives 4063
Esker J. see Pederson R. L. 2643
Esquivel B. see del Carmen Fernández M. 7199

Ettouati L. Ahond A. Poupat C. and **Potier P.** Première hémisynthèse d'un composé de type taxane porteur d'un groupement oxétane en 4(20),5 9823
Evans P. A. and **Holmes A. B.** Medium ring nitrogen heterocycles 9131
Evans S. A., Jr. see Pautard-Cooper A. 1603
Ezquerra J. see Matia M. P. 7329
Facchine K. L. see Oyler A. R. 6549
Facon I. see Aranda G. 8339
Fadel A. A new and convenient synthesis of 1-aminocyclopropanecarboxylic acid from cyclopropanone acetal 6265
Fainzilberg A. A. see Gakh A. A. 7447
Fairbanks A. J. Fleet G. W. J. Jones A. H. Bruce I. Al Daher S. Cenci de Bello I. and **Winchester B.** Synthesis from a heptonolactone and effect on glycosidases of (1*S*,2*R*,6*R*,7*S*)-1,2,6,7-tetrahydroxypyrrolizidine 131
Faisal Hashim M. see Hakamatsuka T. 5969
Faita G. see Desimoni G. 5857
Faita G. see Desimoni G. 8399
Falcou S. see Dubois J. 1001
Falorni M. see Chelucci G. 8251
Fang X. Anderson J. E. Chang C. and **McLaughlin J. L.** Three new bioactive styryllactones from *Goniothalamus giganteus* (Annonaceae) 9751
Fañanás R. see Domínguez E. 9253
Farfán N. see Flores-Parra A. 6903
Fariña F. see de Ancos B. 3171
Farkas I. see Kovács L. 5539
Farkas I. see Kovács L. 5549
Farma F. see Rossi E. 5819
Farnetti E. see Spogliarich R. 1965
Farnier M. see Aubert T. 53
Farr R. A. see Peet N. P. 7537
Farschtschi N. see Piotto M. E. 2449
Fasani E. see d'Alessandro N. 5043
Fasani E. see Mella M. 3137
Fattuoni C. see Cabiddu S. 9279
Faulkner D. J. see Davies-Coleman M. T. 9743
Faulkner D. J. see He H. 3271
Faulkner D. J. see Kassühlke K. E. 1809
Felber H. see Braun H. 3313
Feliciano A. S. Caballero E. Pereira J. A. P. and **Puebla P.** 2,3,8,8*a*-Tetrahydro-7*H*-oxazolo[3,2-*a*]pyridine: a new heterocyclic system 6503
Feller A. see Fetter J. 9393
Feneau-Dupont J. see Rousselle D. 8323
Fenical W. see Stout T. J. 3511
Fernández J. J. see Norte M. 7437
Fernández J. J. see Öztunç A. 2273
Fernández Mateos A. Ferrero Barrueco O. de Pascual Teresa J. and **Rubio González R.** Synthesis of (-) 4,8 β-dimethyl testolactone from (+) O-15-methyl isoagathate 4375
Fernandez R. P. see Aquino M. 7887
Fernandez-Forner D. Eritja R. Bardella F. Ruiz-Perez C. Solans X. Giralt E. and **Pedroso E.** Preparation of oligonucleotides containing dAiCA using an unexpected side-reaction observed on a protected derivative of 2-aza-2'-deoxyinosine 8917
Fernandez-Moreno M. see Sherman D. H. 6029
Fernández-Moro R. see Bates R. W. 9929
Fernández-Sánchez L. see Flores-Parra A. 6903
Ferreira D. see Steenkamp J. A. 6705
Ferreri C. see Caputo R. 4187
Ferrero Barrueco O. see Fernández Mateos A. 4375
Fetizon M. see Bastard J. 229
Fetter J. Czuppon T. Hornyák G. and **Feller A.** The synthesis of some 3-amino-2-halomethyl-, 2-halomethyl-3-(subst.amino)- and 2-halomethyl-3-hetarylquinazolin-4-(3*H*)-ones as potential plant protecting agents 9393
Fioravanti S. Loreto M. A. Pellacani L. and **Tardella P. A.** Asymmetric formation of C–N bonds in chiral enol ethers 5877
Fischer D. A. see Craig D. 3095
Fischer H. see Jochims J. C. 205
Fischer J. see Solladié-Cavallo A. 249
Flanagan M. E. see Williams R. M. 2629
Fleet G. see de S. Pereira A. C. 5637
Fleet G. W. J. see Fairbanks A. J. 131
Fleet G. W. J. Seijas J. A. and **Vázquez-Tato M. P.** Synthesis of the necine base platynecine from glucose 525
Flentge E. see van Leusen D. 4639
Fletcher M. T. see DeVoss J. J. 1985
Flippen-Anderson J. L. see Marchand A. P. 907
Flitter W. D. see Milgrom L. R. 7683
Flitter W. D. see Milgrom L. R. 9129
Florence M. R. see Ramage R. 8001
Flores-Parra A. Farfán N. Hernández-Bautista A. I. Fernández-Sánchez L. and **Contreras R.** NMR study of the effect of nitrogen-borane coordination on the conformational equilibrium of six membered ring heterocycles 6903
Florio S. Ingrosso G. Ronzini L. and **Epifani E.** Stereoselective synthesis of vinylbenzothiazoles and their epoxides 3365
Florio S. see Epifani E. 4465
Florio S. see Epifani E. 7489
Floris C. see Cabiddu S. 9279
Floss H. G. and **Strohl W. R.** Genetic engineering of hybrid antibiotics—a progress report 6045
Földesi A. Agback P. Glemarec C. and **Chattopadhyaya J.** Synthesis of tetrameric branched RNA-DNA conjugate and branched-RNA analogue and their comparative conformational studies by 500 MHz NMR spectroscopy 7135
Földesi A. see Sund C. 6305
Folpini E. see Clerici F. 8907
Font J. see Alonso D. 5895
Font J. see Bernaus C. 7713
Font J. see Branchadell V. 8775
Fontana F. see Coppa F. 7343
Fos E. see García M. L. 10023
Foti M. see Caccamese S. 10101
Fourès C. see Dubois J. 1001
Fourie L. see Martins F. J. C. 8373
Fourie L. see Martins F. J. C. 9215
Fournet G. Balme G. et **Goré J.** Synthèse de (*E*)-arylidène et allylidène cyclopentanes par une annélation catalysée par un complexe de palladium(0) 6293
France C. J. McFarlane I. M. Newton C. G. Pitchen P. and **Barton D. H. R.** Bis-deoxygenation of methyl 3,6-anhydro-D-pyranosides 6381
Francis T. see Chen Y. 4869
Francotte E. see Rousselle D. 8323
Franken H.-D. Rüterjans H. and **Müller F.** The structure of barbituric acid and its 5,5-djethyl derivative as revealed by ^{15}N nuclear magnetic resonance techniques 7593
Franzus B. see Dabbah H. A. 949

Fraser-Reid B. see Yu K. L. 189
Fréchard-Ortuno I. see Avignon-Tropis M. 7279
Fréchet D. Danzer M. Debu F. Monegier du Sorbier B. Reisdorf D. Snozzi C. and **Vuilhorgne M.** Structure elucidation of RP 63834 a new macrocyclic lactone antibiotic 61
Freeman J. P. see D'Andrea S. V. 6157
Freeman J. P. see Ghosh A. 8653
Frejd T. see Inghardt T. 6469
Frejd T. see Inghardt T. 6483
Frejd T. see Polla M. 5883
Frelek J. see Hedtmann U. 3753
Frenking G. Köhler K. F. and **Reetz M. T.** On the origin of π-facial diastereoselectivity in nucleophilic additions to chiral carbonyl compounds—I. Rotational profiles of propionaldehyde 1, chloroacetaldehyde 2, and 2-chloro-propionaldehyde 3 8991
Frenking G. Köhler K. F. and **Reetz M. T.** On the origin of π-facial diastereoselectivity in nucleophilic additions to chiral carbonyl compounds—II. Calculated transition state structures for the addition of nucleophiles to propionaldehyde 1, chloroacetaldehyde 2, and 2-chloropropionaldehyde 3 9005
Frérot E. Coste J. Pantaloni A. Dufour M.-N. and **Jouin P.** PyBOP® and PyBroP: two reagents for the difficult coupling of the α,α-dialkyl amino acid, Aib 259
Fresneda P. M. see Molina P. 4175
Friary R. J. and **Schwerdt J. H.** Oxidative cleavage of a tricyclic pyridone to a bicyclic lactam-dione 9981
Friesen R. W. see Piers E. 4555
Frimer A. A. Ripstos S. Marks V. Aljadeff G. Hameiri-Buch J. and **Gilinsky-Sharon P.** The photosensitized oxidation of α-keto enols: a singlet oxygen approach to 2-oxasteroids 8361
Frischmuth K. Samson E. Kranz A. Welzel P. Meuer H. and **Sheldrick W. S.** Routes to derivatives of strigol (the witchweed germination factor) modified in the 5-position 9793
Frischmuth K. see Samson E. 1411
Fronza G. Fuganti C. Grasselli P. Pulido-Fernandez R. Servi S. Tagliani A. and **Terreni M.** On the mode of baker's yeast reduction of enantiomeric 4-acyl butanolides 9247
Fronza G. see Aquino M. 7887
Frost J. W. see Piehler L. T. 2423
Fu X. see Gupta A. K. 3665
Fuchicello A. see Annunziata R. 3853
Fuchigami T. see Konno A. 887
Fuchigami T. Yamamoto K. and **Konno A.** Electrolytic reactions of fluoro organic compounds—VIII. Further study on anodic methoxylation and acetoxylation of aryl fluoroalkyl sulfides 625
Fuchs B. see Aped P. 5781
Fuchs B. see Müller R. 1013
Fuentes J. Pradera M. A. and **Robina I.** Preparation and properties of 2-deoxyglycosyl isothiocyanates 5797
Fuganti C. see Aquino M. 7887
Fuganti C. see Fronza G. 9247
Fujiki H. see Matsunaga S. 2999
Fujimoto H. see Hataue I. 9317
Fujita H. see Tokuda M. 747
Fujita K. see Kahn M. 1137
Fujita S. Promolecules for characterizing stereochemical relationships in non-rigid molecules 31
Fujiyoshi-Yoneda T. see Osawa E. 4579
Fukuda D. S. see Sanson D. R. 3633
Fukui K. see Konno A. 887
Fukumoto K. see Ihara M. 6635
Fukusaki E. Senda S. Nakazono Y. and **Omata T.** Lipase-catalyzed kinetic resolution of methyl 4-hydroxy-5-tetradecynoate and its application to a facile synthesis of Japanese beetle pheromone 6223
Fullas F. Hussain R. A. Bordas E. Pezzuto J. M. Soejarto D. D. and **Kinghorn A. D.** Guadichaudiosides A–E, five novel diterpene glycoside constituents from the sweet-tasting plant, *Baccharis guadichaudiana* 8515
Fuller L. S. see Jones G. 2851
Fuller L. S. see Jones G. 2861
Fülöp F. Huber I. Szabó Á. Bernáth G. Sohár P. Synthesis of pyrimido[2,1-*b*]thiazin-6-one by retro Diels-Alder reaction 7673
Fülöp F. see Parkkinen A. 2229
Fülöp F. see Pihlaja K. 4031
Funabashi Y. see Tsubotani S. 8079
Funakoshi K. see Taura Y. 4879
Furstoss R. see Vigne B. 1447
Furukawa Y. see Shiozaki M. 2785
Furuya T. see Sato M. 7263
Fusetani N. see Matsunaga S. 2999
Gadamasetti K. G. see Sundberg R. J. 5673
Gaggero N. see Colonna S. 8385
Gairí M. see Lloyd-Williams P. 9867
Gakh A. A. Romaniko S. V. Ugrak B. I. and **Fainzilberg A. A.** N-Fluorination with cesium fluoroxysulfate 7447
Galceran M. see Bonjoch J. 4417
Galeffi C. see Chifundera K. 4369
Galeffi C. see Marini-Bettolo G. B. 6717
Gallegos R. see Williams R. M. 2629
Gálvez N. see Lloris M. E. 8031
Gambacorta A. Turchetta S. Bovicelli P. and **Botta M.** Synthesis of substituted *cis*-bicyclo[3.3.0]octane-1-carbonyl derivatives by stereospecific rearrangement of 1-chloro-9-hydroxybicyclo[3.3.1]nonanes 9097
Ganazzoli F. see Dalpozzo R. 1091
Gandhi R. P. see Ishar M. P. S. 2211
Gandolfi R. see Burdisso M. 6725
Gandolfi R. see Burdisso M. 7699
Ganem B. see Liotta L. J. 2433
Ganem B. see Stewart J. 2573
Ganesh K. N. see Gopalakrishnan V. 1075
Ganesha Prasad K. B. see Kasturi T. R. 5245
Gani D. see Baker G. R. 3895
Gani D. see Thomas N. R. 497
Gao F. see Pettit G. R. 3601
García H. see Climent M. J. 9289
García M. L. Pascual J. Borràs L. Andreu J. A. Fos E. Mauleón D. Carganico G. and **Arcamone F.** Synthesis of new ether glycerophospholipids structurally related to modulator 10023
García Ruano J. L. see 605
García Ruano J. L. see Carmen Carreño M. 10035
García-Granados A. Martínez A. Onorato M. E. Rivas F. and **Arias J. M.** Chemical–microbiological synthesis of 6β–eudesmanolides by *Curvularia lunata* cultures from eudesmanes with functions at C-1 and C-6 91
García-Granados A. see Amate Y. 5811
Garcia-Granados A. and **Parra A.** Rearrangement processes in the bicyclo[3.2.1]heptane moiety of 12,17-bifunctionalized *ent*-beyer-15-enes 9103
Garcia-Granda S. see Abarca B. 5277
García-Navío J. L. see Matia M. P. 7329
Gardner M. see Bernardi A. 3471

Garlaschelli L. de Tullio P. and **Vidari G.** Synthetic studies on biologically active natural compounds—III. Stereospecific transformation of uvidin A into (–)-cinnamosmolide 6769
Garlaschelli L. see De Bernardi M. 7109
Garraffo H. M. see Tokuyama T. 5401
Garraffo H. M. see Tokuyama T. 5415
Gasparski C. M. and **Miller M. J.** Corrigendum 8461
Gasparski C. M. and **Miller M. J.** Synthesis of β-hydroxy-α-amino acids by aldol condensation using a chiral phase transfer catalyst 5367
Gatti A. see Canepa C. 1485
Gaudry M. see Dubois J. 1001
Gauffeny F. see Marra A. 5149
Gaumont A. C. Wazneh L. and **Denis J. M.** Thiocyanohydrins, a new class of compounds, precursors of unstabilized thiocarbonyl derivatives 4927
Geletii Y. V. see Barton D. H. R. 6561
Gelli G. see Cabiddu S. 9279
Gelmi M. L. see Clerici F. 8907
Gennari C. see Bernardi A. 3471
George C. see Marchand A. P. 907
Georgieva A. Stanoeva E. Spassov S. Macicek J. Angelova O. Haimova M. and **De Kimpe N.** Reactions of α-chloroimines with homophthalic anhydrides. Synthesis and molecular structure of 3,3a-dihydrofuro[3,4-*c*]isoquinoline-1,5(4*H*,9b*H*)-diones, furo[3',4':9,9*a*]-8,9,16,16a-tetrahydro-1H,3H,11H-dibenzo[*a*,*g*]quinolizine-1,11-diones and related compounds 3375
Gerardin P. see Loubinoux 239
Geribaldi S. et **Rouillard M.** Réaction de Wittig–Horner entre phosphonates et cyclohexénones β-substituées 993
Géro S. D. see Barton D. H. R. 9383
Ghidini E. see Casnati A. 2221
Ghosh A. Wang W. Freeman J. P. Althaus J. S. Von Voigtlander P. F. Scahill T. A. Mizsak S. A. and **Szmuszkovicz J.** Stereocontrolled syntheses of some conformationally restricted analogs of serotonin 8653
Ghosh S. K. Chattopadhyay S. and **Mamdapur V. R.** A chemoenzymatic approach to (*R*)-tetrahydro-5-oxo-2-(2-hydroxyethyl)furan, a useful chiral synthon: application to the synthesis of (*S*)-4-hexanolide, pheromone antipode of *Trogoderma glabrum* 3089
Giacomelli G. see Chelucci G. 8251
Giaroni P. see Annunziata R. 5737
Giese R. W. see Abdel-Baky S. 5667
Gijsen H. J. M. Wijnberg J. B. P. A. Stork G. A. and **de Groot A.** The synthesis of (–)-kessane, starting from natural (+)-aromadendrene—II 4409
Gil S. see Aurell M. J. 1997
Gilardi R. see Marchand A. P. 907
Gilchrist T. L. see Allcock S. J. 10053
Gilchrist T. L. see Clarke S. J. 5615
Gilday J. P. see Dickens M. J. 8621
Giles P. R. and **Marson C. M.** Oxidative formylation and chloromethylation in Vilsmeier reactions of *O*- and *S*-heterocyclic ketones 1303
Gilinsky-Sharon P. see Frimer A. A. 8361
Ginzel K.-D. see Papadopoulos A. 563
Gioeli C. see Tong W. 3431
Gioeli C. see Wu J.-C. 2237
Giordano F. see Bolognese A. 7417
Giralt E. see Eritja R. 4113
Giralt E. see Fernandez-Forner D. 8917
Giralt E. see Lloyd-Williams P. 9867
Giumanini A. G. see Verardo G. 7845
Glänzer B. I. see Csuk R. 1655
Glass R. S. and **Broeker J. L.** Conformational analysis of naphtho[1,8-*b*,*c*]-1,5-dithiocin and its S-oxides in solution 5087
Glass R. S. and **Broeker J. L.** Synthesis, crystal and molecular structures and conformations of naphtho[1,8-*b*,*c*]-1,5-dithiocin-1,1-dioxide, -1,5-dioxide, -1,1,5-trioxide and -1,1,5,5-tetraoxide 5077
Glemarec C. Besidsky Y. Chattopadhyaya J. Kusmierek J. Grochowski E. and **Pupek K.** A convenient synthesis of β-lactams from alkylthioimidates 6759
Glemarec C. Jaseja M. Sandström A. Koole L. Agback P. and **Chattopadhyaya J.** Solution structure of branched U3'p5'A$_{3'p5'C}^{2'p5'G}$ and its comparison with A$_{3'p5'U}^{2'p5'G}$ by 500 MHz NMR spectroscopy 3417
Glemarec C. see Földesi A. 7135
Glemarec C. see Hovinen J. 4693
Glemarec C. see Koole L. H. 3183
Glinka T. see Williams R. M. 2629
Glocker M. O. see Jochims J. C. 205
Gnabre J. N. Pinnas J. L. Martin D. G. Mizsak S. A. Kloosterman D. A. Baczynskyj J. L. Nielsen J. W. Bates R. B. Hoffmann J. J. and **Kane V. V.** Characterization of steroidal glycosides from *Tylophora sylvatica* 3545
Godfrey C. R. A. see Baldwin J. E. 5835
Goetz M. A. see Singh S. B. 6931
Goldberg I. see Aped P. 5781
Gołebiowski A. and **Jurczak J.** High-pressure [4+2] cycloaddition of 1-methoxy-1,3-butadiene to *N*,*O*-protected D-threoninals and D-*allo*-threoninals 1037
Gołebiowski A. and **Jurczak J.** The cyclocondensation reaction of 1-benzoyloxy-2-*tert*-butyldimethylsilyloxy-4-methoxy-1,3-butadiene with *N*,*O*-protected D-threoninals and D-*allo*-threoninals 1045
Gołebiowski A. Raczko J. Jacobsson U. and **Jurczak J.** Influence of *N*-protecting groups on the stereochemical course of [4+2]cycloaddition of activated dienes to α-amino aldehydes 1053
Gollins D. W. see Baldwin J. E. 5835
Gomez B. see Rodriguez H. 5681
Gonález A. see Moreno-Mañas M. 6511
González A. G. see Norte M. 9411
González C. see Gotor V. 9207
González R. see Banerjee A. K. 2081
González R. see Banerjee A. K. 5641
González R. see Norte M. 7437
González R. see Öztunç A. 2273
Goodman J. M. see Bernardi A. 3471
Gopalakrishnan V. Ganesh K. N. Gunjal A. and **Likhite S. M.** Spectroscopic and enzymatic characterization of 2'-5' and 3'-5' RNA hexamers AACCUU synthesised by phosphotriester approach in solution using 2'-*t*-butyldimethylsilyl protection 1075
Gorbatenko V. I. see Matveyev Yu. I. 1563
Goré J. see Fournet G. 6293

Gorenstein D. G. see Piotto M. E. 2449
Gori L. see Capozzi G. 7185
Goti A. see Pietrusiewicz K. M. 9083
Goto K. see Mio S. 2111
Goto T. see Herunsalee A. 3727
Goto T. see Takahashi H. 6215
Gotor V. Brieva R. González C. and **Rebolledo F.** Enzymatic aminolysis and transamidation reactions 9207
Gottlieb O. R. see de S. Pereira A. C. 5637
Gould S. J. Eisenberg R. L. and **Hillis L. R.** Synthesis directed towards putative advanced intermediates in sarubicin A biosynthesis 7209
Gould S. J. and **Eisenberg R. L.** The origin of the C-2 hydroxyl in the isochorismate synthase reaction 5979
Grabley S. see Romeyke Y. 3335
Gracz H. see Sanson D. R. 3633
Gramain J.-C. Mavel S. Troin Y. and **Vallée-Goyet D.** Photocyclisation de *N*-benzoylénamines. Synthèses de spirocyclohexanes en série isoquinoléine 7287
Gramain J.-C. Troin Y. and **Vallée-Goyet D.** Photocyclisation de *N*-aroylénamines derivées d'acides carboxyliques hétéroaromatiques. Synthèses de spirocyclohexyl piperidines accolées à un hétérocycle 7301
Grandas A. see Beaton G. 2377
Grandguillot J.-C. and **Rouessac F.** Réaction d'ions cétene-iminiums avec différentes oléfines: un nouveau mode d'accès au (±)-gradisol, au (±)-fragranol et aux éthers méthyliques corréspondants 5133
Grandjean D. Pale P. and **Chuche J.** Enzymatic hydrolysis of cyclopropanes. Total synthesis of optically pure Dictyopterenes A and C' 1215
Granger J. N. see Piotto M. E. 2449
Grasselli P. see Fronza G. 9247
Gratchev M. K. see Nifantyev E. E. 9839
Graupner P. R. see Brown D. W. 4383
Gray A. I. see Quader Md. A. 3611
Gray T. see Ramage R. 8001
Graziani M. see Spogliarich R. 1965
Greca M. D. Monaco P. and **Previtera L.** New oxygenated sterols from the weed *Eichhornia crassipes* Solms 7129
Green B. S. see Hadad S. 10095
Green D. L. C. see Thompson C. M. 4223
Green J. see Ramage R. 6353
Gridnev I. D. Shastin A. V. and **Balenkova E. S.** The concerted mechanism of acylamidation, *syn*-stereospecificity of the reaction 5577
Grierson D. S. see Castells J. 7911
Grigg R. Dorrity M. J. Heaney F. Malone J. F. Rajviroongit S. Sridharan V. and **Surendrakumar S.** X=Y—ZH Systems as potential 1,3-dipoles—XXXIV. Generation of nitrones from oximes. Tandem Michael addition–1,3-dipolar cycloaddition reactions. Class 2 processes utilising bifunctional Michael acceptor–dipolarophile components 8297
Grigg R. Heaney F. Markandu J. Surendrakumar S. Thornton-Pett M. and **Warnock W. J.** X=Y—ZH Systems as potential 1,3-dipoles—XXXI. Generation of nitrones from oximes. Background and scope of the tandem 1,2-prototropy-intramolecular cycloaddition sequence 4007
Grigg R. Heaney F. Surendrakumar S. and **Warnock W. J.** X=Y–ZH Systems as potential 1,3-dipoles—XXXII. Generation of nitrones from oximes. Tandem Michael addition-1,3-dipolar cycloaddition reactions. Background and Class 1 processes 4477
Grigg R. Santhakumar V. Sridharan V. Stevenson P. Teasdale A. Thornton-Pett M. and **Worakun T.** The synthesis of bridged-ring carbo- and hetero-cycles via palladium catalysed regiospecific cyclisation reactions 9703
Grigg R. see Armstrong P. 4495
Grimaldo-Morön J. T. see Vincens M. 403
Grinberg S. and **Shaubi E.** Catalytic activity of PEG-quat phase-transfer catalysts in dehydrohalogenation reactions 2895
Groenen L. C. Ruël B. H. M. Casnati A. Verboom W. Pochini A. Ungaro R. and **Reinhoudt D. N.** Synthesis of monoalkylated calix[4]arenes via direct alkylation 8379
Gross P. H. see Drew K. N. 6113
Grossi L. see Dalpozzo R. 1091
Groth U. Köhler T. and **Taapken T.** Zinc(II)-chloride induced thioalkylation of aluminium enolates; enantioselective synthesis of estradiol-3-methyl-17-*tert*-butyl diether 7583
Groth U. Schöllkopf U. and **Tiller T.** Asymmetric synthesis of D-*erythro*-sphingosine 2835
Grouiller A. see Plavec J. 5847
Guarino K. J. see Rosen T. 5391
Guilard R. see Aubert T. 53
Guile S. D. see Ali A. 6407
Guingant A. see Alonso D. 5895
Gulakowski R. J. see Gustafson K. R. 4547
Gulbis J. M. see Gunter M. J. 7853
Gullu M. Razack L. A. Utley J. H. P. King R. J. and **White G. R.** Electro-organic reactions—XXXV. Efficient carbon–oxygen bond formation in the anodic coupling of pyridopyrimidine derivatives 675
Gunasekera M. see Sun H. H. 1185
Gunjal A. see Gopalakrishnan V. 1075
Gunter M. J. Robinson B. C. Gulbis J. M. and **Tiekink E. R. T.** 5,15-Diaryl substituted benzochlorins—synthesis and structure 7853
Guo H. see Van Speybroeck R. 4675
Gupta A. K. Fu X. Snyder J. P. and **Cook J. M.** General approach for the synthesis of polyquinenes via the Weiss reaction 3665
Gurjar M. K. Bhanu M. N. Khare V. B. Bhandari A. Deshmukh M. N. and **Rama Rao A. V.** 1β-Methylthienamycin: some stereocontrolled approaches towards the key intermediate 7117
Gustafson K. R. Munro M. H. G. Blunt J. W. Cardellina, II, J. H. McMahon J. B. Gulakowski R. J. Cragg G. M. Cox P. A. Brinen L. S. Clardy J. and **Boyd M. R.** HIV Inhibitory natural products—III. Diterpenes from *Homalanthus acuminatus* and *Chrysobalanus icaco* 4547
Guyot B. Pornet J. et **Miginiac L.** Le 2-triméthylsilylméthyl allytriméthylsilane, précurseur de carbocycles et hétérocycles à groupe méthylénique 3981
Gygax D. Spies P. Winkler T. and **Pfaar U.** Enzymatic synthesis of β-D-glucuronides with *in situ* regeneration of

uridine 5'-diphosphoglucuronic acid 5119

Haaima G. Lynch M.-J. Routledge A. and **Weavers R. T.** Alkylidene lactone synthesis 5203
Haber M. and **Pindur U.** *N*-Benzoylindole-2,3-quinodimethane: Diels–Alder reactivity and synthetic applications for [*b*]annellated indoles 1925
Hadad S. Green B. S. and **Katzhendler J.** Selective intracomplex reaction of pendant groups in a purine–pyrimidines base pair 10095
Hadjimihalakis P. M. see Takakis I. M. 7157
Haider N. Heinisch G. and **Moshuber J.** Pyridazines—LXI. Unexpected reaction behaviour of pyridazine-carbonitrile derivatives towards phenylmagnesium chloride 8573
Haider N. Inverse-electron-demand Diels-Alder reactions of condensed pyridazines—I. Synthesis of phthalazine derivatives from pyridazino[4,5-d]pyridazines 3959
Haimova M. see Georgieva A. 3375
Hakamatsuka T. Hashim M. F. Ebizuka Y. and **Sankawa U.** P-450-Dependent oxidative rearrangement in isoflavone biosynthesis: reconstitution of P-450 and NADPH:P-450 reductase 5969
Hakoda S. see Tsubotani S. 8079
Halkes S. J. see Nerinckx W. 9419
Hall I. H. see Sood A. 6915
Hallcher R. C. see Coleman J. P. 809
Hallnemo G. see Christenson B. 4739
Hamada Y. Hara O. Kawai A. Kohno Y. and **Shioiri T.** Efficient total synthesis of Al-77-B, a gastroprotective substance from *Bacillus pumilus* Al-77 8635
Hamann C. H. see Holze R. 737
Hameiri-Buch J. see Frimer A. A. 8361
Hammann P. see Romeyke Y. 3335
Hammock B. D. see Messeguer A. 1291
Hammoumi A. see Aranda G. 8339
Hamura M. see Mio S. 2145
Hanaoka M. see Mukai C. 3007
Handa S. see Yu K. L. 189
Hansson T. see Brown D. S. 1311
Hara O. see Hamada Y. 8635
Hara R. see Torisawa Y. 8067
Harada H. see Mori S. 5051
Harada S. see Tsubotani S. 3565
Harada S. see Tsubotani S. 8079
Harasek M. see Nussbaumer P. 4591
Harashima S. Oda O. Amemiya S. and **Kojima K.** Sodium bis(2-methoxyethoxy)(1,1,1,3,3,3-hexafluoro-2-propoxy)aluminum hydride, a new stereoselective reducing agent in a carbacyclin synthesis 2773
Hareau G. see Baudin J.-B. 6655
Harmata M. and **Herron B. F.** The conversion of benzothiazines to 2-alkenyl anilines 8855
Haruyama H. see Mio S. 2121
Hasegawa M. see Machida S. 3737
Hasegawa T. see Niwa H. 2155
Hashimoto A. see Torisawa Y. 8067
Hashimoto Y. Ishizaki T. and **Shudo K.** A multi-centered electrophile formed from a unique bioactive cyclic hydroxamic acid, 4-hydroxy-7-methoxy-2H-1,4-benzoxazin-3(4H)-one 1837
Hashimoto Y. see Machida S. 3737
Hasiak B. see Barbry D. 47
Hata T. see Shiozaki M. 2785
Hatano T. see Yoshida T. 3575
Hataue I. Oishi Y. Kubota M. and **Fujimoto H.** Theoretical study of chemical interactions in crown ether–cation complexes 9317
Haught J. see Boger D. L. 2661
Hayashi H. see Kajiyama S. 5453
Hayashi K. see Shimizu I. 2991
Hayashi M. see Kawai M. 2103
Hayashibe S. see Asaoka M. 6967
Hayes R. see Cremins P. J. 9431
Hazato A. see Tanaka T. 1861
He H. and **Faulkner D. J.** New chlorinated diterpenes from the gorgonian *Junceella gemmacea* 3271
Heaney F. see Armstrong P. 4495
Heaney F. see Grigg R. 4007
Heaney F. see Grigg R. 4477
Heaney F. see Grigg R. 8297
Heaney H. see Bowman W. R. 10119
Hecht S. M. see Carter B. J. 2463
Hedtmann U. Klintz R. Hobert K. Frelek J. Vlahov I. and **Welzel P.** A facile route to 20-hydroxyecdysone and side chain homologues from poststeron 3753
Heinisch G. see Haider N. 8573
Heinz U. see Samson E. 1411
Heissler D. see Beck A. 1459
Hemling M. E. see Carte' B. K. 1815
Hemmasi B. see Willisch H. 3947
Henderson I. see Burgess K. 6601
Hénichart J.-P. see Aichaoui H. 6649
Hensens O. D. Wichmann C. F. Liesch J. M. VanMiddlesworth F. L. Wilson K. E. and **Schwartz R. E.** Structure elucidation of restricticin, a novel antifungal agent from *Penicillium restrictum* 3915
Herald C. L. see Pettit G. R. 3601
Herczegh P. Kovacs I. and **Sztaricskai F. J.** Tartraldeydes-II. Synthesis of D- and L-diginose and D- and L-sarmentose 1541
Herczegh P. see Kovács I. 7837
Herczegh P. see Kovács L. 5539
Herczegh P. see Kovács L. 5549
Hernández-Bautista A. I. see Flores-Parra A. 6903
Hernández-Fuentes I. see Moreno-Mañas M. 6511
Herrmann D. see Stampf P. 7081
Herrmann, Jr., J. L. see Kumar V. 5099
Herron B. F. see Harmata M. 8855
Herunsalee A. Isobe M. and **Goto T.** Diastereoselective heteroconjugate addition of acetylenic derivatives 3727
Hesse M. see Meng Q. 6251
Hetru C. see Dolle F. 7059
Hetru C. see Dolle F. 7067
Hiegemann M. see Rys B. 1417
Hiemstra H. see Esch P. M. 4039
Hiemstra H. see Esch P. M. 4063
Hiemstra H. see Mooiweer H. H. 3451
Hill C. H. see Bit R. A. 4645
Hiller W. see Willisch H. 3947
Hillis L. R. see Gould S. J. 7209
Hino T. see Torisawa Y. 8067
Hirao I. see Sakatsume O. 8717
Hirashima T. see Shundo R. 831
Hirsch K. S. see Markgraf J. H. 183
Hitchings G. J. see Katritzky A. R. 2683
Hitotsuyanagi Y. see Morita H. 2757
Hobert K. see Hedtmann U. 3753
Hobert K. see Samson E. 1411
Hobson A. D. see Marson C. M. 5491
Hocquemiller R. see Cortes D. 8195
Hodgson D. M. Parsons P. J. and **Stones P. A.** A short and efficient synthesis of the C-3 to C-10 portion of the maytansinoids 4133
Hoffman R. V. Synthetic transformations using arenesulfonyloxy groups, first as

electrophiles, then as leaving groups 1109
Hoffmann H. M. R. see Schmidt B. 9357
Hoffmann J. A. see Dolle F. 7067
Hoffmann J. J. see Gnabre J. N. 3545
Hofmann J. see Jochims J. C. 205
Höfner G. see Wanner K. Th. 1895
Holmes A. B. see Curtis N. R. 7171
Holmes A. B. see Evans P. A. 9131
Holze R. and **Hamann C. H.** Electrosynthetic aspects of anodic reactions of anilines and indoles 737
Holzer W. NOE difference spectroscopy as a versatile tool for spectral and structural assignment in various N-1 substituted pyrazoles 1393
Holzer W. On the application of NOE difference spectroscopy for spectral and structural assignments with substituted 1,2,3-triazoles 9783
Holzer W. Spectral and structural assignments with various *N*-substituted 1,24-triazoles: NOE difference spectroscopy as a powerful tool 5471
Hoornaert G. J. see Loosen P. K. 9259
Hoornaert G. J. see Loosen P. K. 9269
Hoornaert G. J. see Meerpoel L. 10065
Hopkins P. B. Millard J. T. Woo J. Weidner M. F. Kirchner J. J. Sigurdsson S. Th. and **Raucher S.** Sequence preferences of DNA interstrand cross-linking agents: importance of minimal DNA structural reorganization in the cross-linking reactions of mechlorethamine, cisplatin and mitomycin C 2475
Hopwood D. A. see Sherman D. H. 6029
Horikawa H. see Yamazaki H. 541
Hornyák G. see Fetter J. 9393
Horváth G. see Rezessy B. 10045
Horwell D. C. see Bourne G. T. 4763
Hoshino T. Williams H. J. Chung Y. and **Scott A. I.** Partial purification and characterization of oxidosqualene-lanosterol cyclase from baker's yeast 5925
Housden N. see Begley M. J. 8417
Hovinen J. Gemarec C. Sandström A. Sund C. and **Chattopadhyaya J.** Spectroscopic, kinetic and semiempirical molecular orbital studies on 8-amino-, 8-methylamino- and 8-dimethylamino-adenosines 4693
Hu Z. see Csuk R. 7037
Huang D.-L. see Breslow R. 2365
Huang M.-J. see Brewster M. E. 7525
Huang T. T.-S. see Dabbagh H. A. 949
Huber E. W. see Peet N. P. 7537
Huber I. see Fülöp F. 7673
Huddleston M. J. see Chen Y. 4869
Huff J. R. see Vacca J. P. 907
Hughes E. M. see Boyle P. H. 5259
Hui Y. see Saad J. M. 2751
Huizenga R. H. van Wiltenburg J. Bieräugel H. and **Pandit U. K.** Models of folate cofactors—XXIII. A synthetic strategy to the Aspidosperma skeleton. Synthesis of the 21-epimer of 20-deethyl-3,17-dioxo-16-ethoxycarbonyl-1-methylaspidospermidine 4165
Huizenga R. H. and **Pandit U. K.** Models of folate cofactors—XXII. Lewis acid catalyzed cyclization of carbon-fragment transfer products of folate cofactor models. Synthesis of enantiomerically pure tetracyclic (ABCE) ring system of Aspidosperma alkaloids 4155
Huss S. De las Heras F. G. and **Camarasa M. J.** Synthesis of 3'-*C*-ethynylnucleosides of thymine 1727
Hussain F. see Page P. C. B. 2871
Hussain R. A. see Fullas F. 8515
Husson H.-P. see Castells J. 7911
Hutchings M. G. Chippendale A. M. Shukla R. and **McPartlin M.** Alkoxide-induced ring-opening of methoxymethylidene-substituted homophthalic anhydride—II. Structure and conformational analysis of the dihydroisocoumarin products 7869
Hutchinson C. R. see Sherman D. H. 6029
Ibhi S. see Cossy J. 7775
Iborra S. see Climent M. J. 9289
Ichinose R. see Mio S. 2111
Ide N. see Shimizu I. 2991
Ihara M. Tokunaga Y. Taniguchi N. and **Fukumoto K.** Stereoselective synthesis of (+)-testosterone via intramolecular 1,3-dipolar cycloaddition of nitrile oxide 6635
Iitaka Y. see Itokawa H. 7007
Iitaka Y. see Morita H. 2757
Ikeda D. see Takahashi A. 3621
Ikeda H. see Kakinuma S. 6059
Ila H. see Bhat L. 305
Ila H. see Rao Ch. S. 3499
Imai K. see Osawa E. 4579
Imbach J.-L. see Baud M.-V. 9993
Imre S. see Öztunç A. 2273
Imrich J. see Bernát J. 4665
Incze M. see Sóti F. 271
Inghardt T. Frejd T. and **Svensson G.** Organoaluminium induced ring-opening of epoxypyranosides—IV. Synthesis and structure of γ-hydroxy-isoleucine stereoisomers and their corresponding lactones 6469
Inghardt T. and **Frejd T.** Organoaluminium induced ring-opening of epoxypyranosides—V. Formal total synthesis of antimycin A_3 and synthesis of (+)-blastmycinone 6483
Inglese J. and **Benkovic S. J.** Multisubstrate adduct inhibitors of glycinamide ribonucleotide transformylase: synthetic and enzyme-assembled 2351
Ingrosso G. see Epifani E. 7489
Ingrosso G. see Florio S. 3365
Inoue J. see Machida S. 3737
Inoue N. see Sato M. 7271
Iqbal J. and **Shukla A.** High diastereofacial selectivity in the reaction of silyl enol ethers with chlorosulfides 8753
Iqbal J. Bhatia B. and **Nayyar N. K.** Cobalt(II) acetate promoted oxidative addition of 1,3-dicarbonyl. Compounds to alkenes under aerobic conditions 6457
Iqbal J. Pandey A. and **Chauhan B. P. S.** Metachloroperoxybenzoic acid promoted stereoselective synthesis of 2,5-disubstituted tetrahydrofurans from α or γ-allyl-β-hydroxy esters: a formal synthesis of (±) methyl nonactate 4143
Iqbal J. see Tarakeshwar P. 297
Iqbal J. and **Srivastava R. R.** Cobalt(II) chloride catalysed cleavage of ethers with acyl halides: scope and mechanism 3155
Iranpoor N. Baltork I. M. and **Zardaloo F. S.** Ceric ammonium nitrate, an efficient catalyst for mild and selective opening of epoxides in the presence of water thiols and acetic acid 9861
Iranpoor N. and **Owji J.** Efficient, mild and regioselective conversion of thiiranes to alkoxy and acetoxy disulphides and dithianes with Ce(IV) based oxidants 149

Irie K. see Kajiyama S. 5453
Irrgang B. and **Mayr H.** Additions of carbenium ions to nonconjugated dienes. The retarding (–I)-effect of the second double bond 219
Isaacs N. S. The role of high pressure methods in organic chemistry 8463
Ishar M. P. S. and **Gandhi R. P.** Photoaddition of benzophenone to allenic esters 2211
Ishibashi M. see Kobayashi J. 6617
Ishibashi M. see Tsuda M. 2181
Ishikawa M. see Sakatsume O. 8717
Ishizaki T. see Boger D. L. 2661
Ishizaki T. see Hashimoto Y. 1837
Ismail M. I. Polarographic reduction of pyrylium salts 1957
Ismail N. A. see Khalifa F. A. 8243
Isobe M. see Herunsalee A. 3727
Isobe M. see Takahashi H. 6215
Isoe S. see Yoshida J. 615
Itai A. see Itokawa H. 7007
Itai A. see Morita H. 2757
Itai A. see Nishibata Y. 8985
Ito M. and **Kibayashi C.** Total synthesis of (+)-monomorine I via nitrone cycloaddition route 9329
Ito S. Iwata M. and **Sasaki K.** Duet electrosynthesis of *p*-benzoquinone from benzene 841
Itô S. see Tsunoda T. 3925
Ito Y. Sasaki A. Tamoto K. Sunagawa M. and **Terashima S.** Highly stereocontrolled synthesis of the 1β-methylcarbapenem key intermediate by the Reformatsky reaction of 3-(2-bromopropionyl)-2-oxazolidone derivatives with a 4-acetoxy-2-azetidinone 2801
Ito Y. and **Terashima S.** Highly stereoselective Reformatsky reactions of 3-(2-bromopropionyl)-2-oxazolidone derivatives with various aldehydes 2821
Itoh M. see Kobayashi K. 5437
Itoh T. Nagata K. Okada M. Takahashi H. and **Ohsawa A.** The substitution of 5-halo-1,2,3-triazines with electrolytically generated superoxide 4317
Itokawa H. Morita H. Takeya K. Tomioka N. Itai A. and **Iitaka Y.** New antitumor bicyclic hexapeptides, RA-VI and -VIII from *Rubia cordifolia;* conformation-activity relationship—II 7007
Itokawa H. see Morita H. 2757
Iwamoto K. Araki K. and **Shinkai S.** Corrigendum 7197
Iwamoto K. Araki K. and **Shinkai S.** Syntheses of all possible conformational isomers of O-alkyl-*p*-*t*-butylcalix[4]arenes 4325
Iwasaki T. see Yamazaki H. 541
Iwata M. see Ito S. 841
Jackson R. A. Stabilization effects in alkanes and in primary, secondary and tertiary alkyl radicals 6777
Jacobsson U. see Gołebiowski A. 1053
Jacquesy J.-C. see Berrier C. 6681
Jacquier R. see Cavelier-Frontin F. 9807
Jäger V. Schröter D. and **Koppenhoefer B.** Asymmetric Sharpless epoxidation of divinylcarbinol. *erythro*-D-And-L-4-pentenitols by hydrolysis of regioisomeric epoxy-4-pentenols 2195
Jäger V. Schröter D. and **Koppenhoefer B.** Corrigendum 4787
Jaime C. see Moreno-Mañas M. 6511
Jaime C. see Osawa E. 4579
Jamie J. F. see DeVoss J. J. 1985
Janda K. D. Benkovic S. J. McLeod D. A. Schloeder D. M. and **Lerner R. A.** Substrate attenuation: an approach to improve antibody catalysis 2503
Jang D. O. see Barton D. H. R. 8969
Janousek Z. see Labille M.-C. 8161
Janssen A. J. M. Klunder A. J. H. and **Zwanenburg B.** Enzymatic resolution of norbor(ne)nylmethanols in organic media and an application to the synthesis of (+)- and (–)-*endo*-norbornene lactone 5513
Janssen A. J. M. Klunder A. J. H. and **Zwanenburg B.** PPL-Catalyzed resolution of 1,2- and 1,3-diols in methyl propionate as solvent. An application of the tandem use of enzymes 7403
Janssen A. J. M. Klunder A. J. H. and **Zwanenburg B.** Resolution of secondary alcohols by enzyme-catalyzed transesterification in alkyl carboxylates as the solvent 7645
Janßen W. see Beck F. 725
Jaseja M. see Glemarec C. 3417
Jaszberenyi J. Cs. see Barton D. H. R. 8969
Jaszberenyi J. Cs. see Barton D. H. R. 9167
Jenhi A. see Chaari M. 4619
Jennings W. B. and **Lovely C. J.** The titanium tetrachloride induced synthesis of *N*-phosphinoylimines and *N*-sulphonylimines directly from aromatic aldehydes 5561
Jesudason C. D. see Baldwin J. E. 5603
Jeyakumar D. see Swanson K. L. 685
Jhingan A. K. and **Meehan T.** Formation of a nitrile via zinc iodide—catalyzed opening of a bay-region polycyclic aromatic hydrocarbon epoxide by trimethylsilyl cyanide 1621
Jiménez C. see Crews P. 3585
Jiménez C. and **Crews P.** Novel marine sponge derived amino acids—XIII. Additional psammaplin derivatives from *Psammaplysilla purpurea* 2097
Jinbu Y. see Komatsu K. 6951
Jochims J. C. Glocker M. O. Hofmann J. and **Fischer H.** N-Acyliminium salts from the reaction of nitrilium salts with aldehydes 205
John L. see Tinto W. F. 8679
Johns A. see Begley M. J. 8417
Johnson D. see Sherman D. H. 6029
Johnson M. R. see Cobb J. E. 21
Johnstone K. see Mortishire-Smith R. J. 3645
Jones A. H. see Fairbanks A. J. 131
Jones G. Ollivierre H. Fuller L. S. and **Young J. H.** 1,2,3-Triazolo[5,1-*b*]thiazoles—I. Synthesis and properties 2851
Jones G. Ollivierre H. Fuller L. S. and **Young J. H.** 1,2,3-Triazolo[5,1-*b*]thiazoles—II. Lithiation experiments leading to 2,4-disubstituted thiazoles 2861
Jones G. see Abarca B. 5277
Jones K. and **Woo K.-C.** A total synthesis of (–)-ruspolinone 7179
Jordan B. M. see Bowman W. R. 10119
Jordan P. M. and **Spencer J. B.** Mechanistic and stereochemical investigation of fatty acid and polyketide biosynthesis using chiral malonates 6015
Jorgensen W. L. see Pranata J. 2491
Joshi B. S. Pelletier S. W. Zhang X. and **Snyder J. K.** Proton and carbon-13 NMR studies of delpheline, 8,9-methylenedioxylappaconitine and dictyzine 4299
Joshi B. S. see Ross S. A. 9585
Jouannestaud M.-P. see Berrier C. 6681
Jouin P. see Frérot E. 259
Joullié M. M. Thompson T. R. and **Nemeroff N. H.** Ninhydrin

and ninhydrin analogs. Syntheses and applications 8791
Ju S. see Parry R. J. 6069
Julia M. McDonald B. and **Rezende M. C.** Biomimetic transalkylation of olefins via sulfonium salts 6939
Julia S. A. see Baudin J.-B. 3353
Julia S. A. see Baudin J.-B. 6655
Junjappa H. see Bhat L. 305
Junjappa H. see Rao Ch. S. 3499
Juranic I. O. see Lorenc L. B. 6389
Jurczak J. see Gołebiowski A. 1037
Jurczak J. see Gołebiowski A. 1045
Jurczak J. see Gołebiowski A. 1053
Kaetsu A. see Sato T. 3281
Kagechika K. see Mori M. 531
Kahn M. and **Fujita K.** Enantiospecific routes to 3,4 disubstituted azetidinones 1137
Kajiyama S. Irie K. Kido T. Koshimizu K. Hayashi H. and **Arai M.** Synthesis of new indolactam analogues by microbial conversion 5453
Kajtár-Peredy M. see Sóti F. 271
Kakinuma K. Matsuzawa T. and **Eguchi T.** Diacetone glucose architecture as a chirality template—I. Crucial effects of the intramolecular oxygens upon the $LiAlH_4$ reduction of the propargyl alcohol of 3-*C*-ethynyl-1,2:5,6-di-*O*-isopropylidene-α-D-allofuranose derivatives 6975
Kakinuma S. Ikeda H. and **Omura S.** Genetic studies of the biosynthesis of kalafungin, a benzoisochromanequinone antibiotic 6059
Kakuno T. Yoshikawa K. Arihara S. Takei M. and **Endo K.** Ilexosides E, F, G, H and I, novel 18,19-seco-ursane glycosides from fuit of *Ilex crenata* 7219
Kamakshi C. see Pelter A. 1275
Kaminski J. J. see Brewster M. E. 7525
Kaminski J. M. see Chrusciel R. A. 8831
Kane V. V. see Gnabre J. N. 3545
Kaneko C. see Sakaki J. 6197
Kaneko C. see Sato M. 5689
Kaneko C. see Sato M. 7271
Kanetaka S. see Shono T. 593
Kanno Y. see Kobayashi K. 7245
Kaplan M. A. C. see de S. Pereira A. C. 5637
Karady S. Corley E. G. Abramson N. L. Amato J. S. and **Weinstock L. M.** Cyclization of electrochemically generated nitrogen radicals. A novel synthesis of 11-substituted dibenzo[*a*,*d*]cycloheptenimine derivatives 757
Kardos-Balogh Z. see Sóti F. 271
Karunakaran C. and **Manimekalai P.** Kinetics and mechanism of perborate oxidation of organic sulphides 8733
Karvinen E. see Lounasmaa M. 6371
Kasheva T. N. see Solodenko V. A. 3989
Kashimura S. see Shono T. 593
Kashyap R. P. see Marchand A. P. 907
Kashyap R. P. see Marchand A. P. 961
Kassühlke K. E. and **Faulkner D. J.** Two new dibromotyrosine derivatives from the Caribbean sponge *Pseudoceratina crassa* 1809
Kasturi T. R. Mandal A. B. Reddy P. A. Prasad K. B. G. and **Rajasekhar B.** One pot synthesis of polycyclic oxygen aromatics—III. Mechanism of formation 5245
Kato Y. see Tanaka T. 1861
Katritzky A. R. Rachwal S. and **Hitchings G. J.** Benzotriazole: a novel synthetic auxiliary 2683
Katzhendler J. see Hadad S. 10095
Kawaguchi A. see Saito K. 5955
Kawai A. see Hamada Y. 8635
Kawai M. Ogura T. Butsugan Y. Taga T. and **Hayashi M.** Benzilic acid rearrangement-type reaction of physalins to neophysalins. Structural revision of one of the dehydration products of physalin A 2103
Kawai N. see Teshima T. 3305
Keay B. A. see Piers E. 4555
Keech E. see Bit R. A. 4645
Keegan J. R. see Bates F. X. 4991
Keese R. see Zhang C. 3059
Keinan E. Sinha S. C. and **Singh S. P.** Thermostable enzymes in organic synthesis—V. Total synthesis of *S*-(+)-Z-dodec-3-en-11-olide (ferrulactone II) using a TBADH-generated bifunctional chiron 4631
Keller M. see Romeyke Y. 3335
Kemal Ö. see Craig D. 3095
Keresztury G. see Sóti F. 271
Kettner B. Ledl F. Lerche H. and **Severin T.** 5,6-Dihydro-3,5-dihydroxy-4H-pyridones—new Maillard products from 6-O-substituted hexoses and primary amines 9351
Khalifa F. A. Ismail N. A. Elghandour A. H. H. and **Zohdi H. F.** Benzoin in heterocyclic synthesis: synthesis and reactions of 4-cyano-2,3-diphenyl-2*H*-pyrrol-5-thione 8243
Khan I. see Al-Husaini A. H. 3845
Khanolkar A. D. see Bailey W. F. 7727
Khare V. B. see Gurjar M. K. 7117
Khattab H. A. see Boyle P. H. 5259
Khiar N. see Solladié-Cavallo A. 249
Khorasani M. F. see Loosen P. K. 9259
Khorasani M. F. see Loosen P. K. 9269
Kibayashi C. see Ito M. 9329
Kido M. see Mukai C. 3007
Kido T. see Kajiyama S. 5453
Kigabo F. see Berrier C. 6681
Kikuchi T. see Sato T. 3281
Kikuoka M. see Ohmori H. 767
Kim D. see Curran D. P. 6171
Kim D. see Curran D. P. 6189
Kim I. J. see Mukai C. 3007
Kim K. see Cheng M.-C. 4861
Kim Y. J. see Lee W. S. 8091
Kimura M. Matsubara S. Yamamoto Y. and **Sawaki Y.** Electrooxidative C–S cleavages as a neutral deprotection for carboxylic acids 867
King F. D. see Allcock S. J. 10053
King R. J. see Gullu M. 675
Kinghorn A. D. see Cordell G. A. 3521
Kinghorn A. D. see Fullas F. 8515
Kintscher J. see Martens J. 7029
Kirchner J. J. see Hopkins P. B. 2475
Kishi N. Mikami K. and **Nakai T.** Vinylsilane-terminated cycloacylation: a general synthetic approach to four- to six-membered cyclic ketones and its regiochemical features 8111
Kitagawa I. Lee N. K. Kobayashi M. and **Shibuya H.** Marine natural products—XXV. Biologically active tridecapeptide lactones from the Okinawan marine sponge *Theonella swinhoei* (Theonellidae). Structure of theonellapeptolide Id 2169
Kitagawa J. see Mio S. 2145
Kitahara T. Kiyota H. Kurata H. and **Mori K.** Synthesis of oxygengated eremophilanes, gigantenone, phomenone and phaseolinone, phototoxins from pathogenic fungi 1649
Kitahara T. Nishi T. and **Mori K.** Synthesis of both the enantiomers of methyl epijasmonate 6999
Kitajima M. see Takayama H. 1383

Kitazawa N. see Sato M. 7271
Kitching W. see DeVoss J. J. 1985
Kiyota H. see Kitahara T. 1649
Klaic B. see Cudic P. 5295
Klintz R. see Hedtmann U. 3753
Kloosterman D. A. Gnabre J. N. 3545
Kluge H. see Romeyke Y. 3335
Klunder A. J. H. see Janssen A. J. M. 7645
Klunder A. J. H. see Janssen A. J. M. 5513
Klunder A. J. H. see Janssen A. J. M. 7409
Klunder A. J. H. see Lange J. H. M. 1495
Klunder A. J. H. see Lange J. H. M. 1509
Klusener P. A. A. Tip L. and **Brandsma L.** On the direct metalation of isoprene 2041
Kniežo L. see Bernát J. 4665
Knobler C. B. see Benson D. R. 2401
Knoch F. see Papadopoulos A. 563
Knox J. R. see Baker R. W. 7951
Knox J. R. see Baker R. W. 7965
Kobayashi J. see Shigemori H. 8529
Kobayashi J. see Tsuda M. 2181
Kobayashi J. Tsuda M. Agemi K. Shigemori H. Ishibashi M. Sasaki T. and reductions of cage diketones 6571
Kobayashi K. Itoh M. Sasaki A. and **Suginome H.** New short step general synthesis of isobenzofuran-1(3*H*)-ones (phthalides) based on a single or double β-scission of alkoxyl radicals generated from 1-ethylbenzocyclobuten-1-ols and from 1,3-dihydroisobenzofuran-1-ols; synthesis of some natural phthalides 5437
Kobayashi K. Sasaki A. Kanno Y. and **Suginome H.** A new route γ-substituted to γ-lactones and δ-substituted δ-lactones based on the regioselective β-scission of alkoxyl radicals generated from transannular hemiacetals 7245
Kobayashi M. see Kitagawa I. 2169
Kobayashi N. see Sugai T. 7237
Kobayashi Y. see Shiozaki M. 2785
Kobayashi Y. see Shiozaki M. 7021
Kochetkov N. K. see Sviridov A. F. 2291
Kochetkov N. K. see Sviridov A. F. 2317
Kocienski P. see Ashworth P. 9939
Koehn F. E. see Sun H. H. 1185
Koga M. see Tanaka T. 1861
Kohchi Y. see Mori Y. 4889
Köhler K. F. see Frenking G. 8991
Köhler K. F. see Frenking G. 9005
Köhler T. see Groth U. 7583
Kohno Y. see Hamada Y. 8635
Kojima K. see Harashima S. 2773
Kollenz G. see Terpetschnig E. 3045
Komatsu K. Akamatsu H. Aonuma S. Jinbu Y. Maekawa N. and **Takeuchi K.** Formation, properties, and reactions of the 1,2:3,4:5,6-tris(bicyclo[2.2.2] octeno)tropylium ion 6951
Kondo K. see Morita H. 2757
Kondo Y. see Sakamoto T. 1877
Kondo Y. see Sakamoto T. 5111
König G. M. see Wright A. D. 5717
König G. M. Wright A. D. and **Sticher O.** New xenicane and hydroazulenoid diterpenes from an Australian collection of *Dictyota divaricata* 1399
Konno A. Fukui K. Fuchigami T. and **Nonaka T.** Anodic generation of polybromochloride ions and their utilization as precisely-controlled oxidizing reagents for ex-cell indirect electrooxidation of alcohols 887
Konno A. see Fuchigami T. 625
Konopelski J. P. see Boehler M. A. 4519
Konopelski J. P. see Eid, Jr. C. N. 975
Konstantinovic S. see Vukicevic R. 859
Koole L. see Glemarec C. 3417
Koole L. see Plavec J. 5847
Koole L. H. Agback P. Glemarec C. Zhou X.-X. and **Chattopadhyaya J.** Solution structure of pentameric and heptameric branched-RNA modelling the lariat structure of group II or nuclear m-RNA introns studied by one- and two-dimensional NMR spectroscopy at 500 MHz 3183
Koole L. H. see Plavec J. 7363
Koomen G.-J. see van den Bos J. C. 6787
Koomen G.-J. see Wanner M. J. 8431
Koppenhoefer B. see Jäger V. 2195
Koppenhoefer B. see Jäger V. 4787
Körmendy K. see Csámpai A. 4457
Korthals J. S. see Zimmerman S. C. 2649
Koshimizu K. see Kajiyama S. 5453
Kotani T. see Bessiere Y. 4355
Kovács I. Herczegh P. and **Sztaricskai F. J.** Tartraldehydes—III. Synthesis of N-benzoyl-L-acosamine 7837
Kovács I. see Herczehg P. 1541
Kovács L. Herczegh P. Batta G. and **Farkas I.** Thiazole *C*-nucleosides—III. Synthesis of pyranose analogues of tiazofurin 5539
Kovács L. Herczegh P. Batta G. and **Farkas I.** Thiazole *C*-nucleosides—IV. An entry to pent-1'-enopyranosylthiazole derivatives 5549
Kövér K. E. see Batta Gy. 3535
Kowalska J. A. see Epsztajn J. 1697
Kozlova E. V. see Solodenko V. A. 3989
Kozlowski J. F. see Saad J. M. 2751
Krakowiak K. E. see Olsher U. 2947
Kranz A. see Frischmuth K. 9793
Kratky C. see Csuk R. 7037
Krayushkin M. M. see Belen'kii L. I. 447
Krayushkin M. M. see Yakubov A. P. 5237
Kreße G. see Braun H. 3313
Krishnan L. see Bose A. K. 5379
Krolski M. E. see Kumar V. 5099
Krow G. R. Lee Y. B. Raghavachari R. Szczepanski S. W. and **Alston P. V.** Azatricycles from substituted pyridines. Synthesis and rearrangement of *N*-ethoxycarbonyl-2-azatricyclo[4.3.1.$0^{3,7}$]dec-8-enes 8499
Kubota M. see Hataue I. 9317
Kukhar V. P. see Solodenko V. A. 3989
Kulagowski J. J. see Vacca J. P. 907
Kulkarni D. G. see Sonawane H. R. 8259
Kulkarni G. H. Naik R. H. Tandel S. K. and **Rajappa S.** Contra-thermodynamic *trans*-esterification of carbamates by counter-attack strategy: a viable non-phosgene, non-MIC route to carbamate pesticides 1249
Kumagawa Y. see Mio S. 2133
Kumar M. U. see Sonawane H. R. 8259
Kumar V. Daum S. J. Bell M. R. Alexander M. A. Christiansen R. G. Ackerman J. H. Krolski M. E. Pilling G. M. Herrmann, Jr., J. L. Winneker R. C. and **Wagner M. M.** Synthesis and androgen receptor affinity of steroidal

methylsulfonylfurans and a methylsulfonylthiophene 5099
Kumaravel G. see Vankar Y. D. 2027
Kuo E. E. see Bain J. D. 2389
Kurata H. see Kitahara T. 1649
Kurozumi S. see Tanaka T. 1861
Kusmierek J. see Glemarec C. 6689
Kutchan T. M. Dittrich H. Bracher D. and **Zenk M. H.** Enzymology and molecular biology of alkaloid biosynthesis 5945
Kutyrev A. A. Nucleophilic reactions of quinones 8043
Kuzmic P. Sun C.-Q. Zhao Z.-C. and **Rich D. H.** Long range electrostatic effects in pepsin catalysis 2519
Kwast A. see Makosza M. 5001
Laaksonen A. see Berg J.-E. 9915
Labille M.-C. Janousek Z. and **Viehe H. G.** Synthesis and reactivity of captodative cyanoketenes 8161
Labrie F. see Poirier D. 7751
Lafquih Titouani S. Soufiaoui M. Toupet L. Vaultier M. et **Carrie R.** Carbénation et époxydation de 1-indanones 1'-spiro 3'-cyclohexène et de 1-tétralones 1'-spiro 3'-cyclohexène 1665
Lahti M. Oivanen M. and **Lönnberg H.** N^2,3-Ethenoguanosine and [A'-metamorphosine: ^{15}N NMR spectroscopy and elucidation of physico-chemical properties by kinetic and equilibrium measurements 6689
Lahti M. see Glemarec C. 6689
Lallemand J.-Y. see Aranda G. 8339
Lamara K. and **Smalley R. K.** 3*H*-Azepines and related systems—IV. Preparation of 3*H*-azepin-2-ones and 6*H*-azepino[2,1-*b*]quinazolin-12-ones by photo-induced ring expansions of aryl azides 2277
Lambert C. and **Christiaens L.** Stabilisation of condensed selenium heterocycles by a nitro group in the *ortho*-position to the chalcogen 9053
La Monica G. see Chioccara F. 4429
Landais Y. Robin J.-P. and **Lebrun A.** Ruthenium dioxide in fluoro acid medium—I. A new agent in the biaryl oxidative coupling. Application to the synthesis of non phenolic bisbenzocyclooctadienes lignan lactones 3787
Landini D. Maia A. Corda L. Maccioni A. and **Podda G.** Catalytic activity of cyclophosphazenic polypodands in phase-transfer reactions. Comparison with open-chain analogues 7477
Landini D. and **Maia A.** Effect of the anion hydration state on the selectivity coefficients ($K_{Y/Z}^{sel}$) of quaternary onium salts under phase-transfer catalysis conditions 1285
Lange J. H. M. Klunder A. J. H. and **Zwanenburg B.** Synthesis, [3,3]-sigmatropic rearrangement and electrophilic behavior of angularly alkylated 2-carbethoxy-tricyclo[5.2.1.$0^{2,6}$]-decadienones 1495
Lange J. H. M. Klunder A. J. H. and **Zwanenburg B.** Thermal generation of 2-alkyl-3-carbethoxy-cyclopentadienones from the angularly alkylated tricyclo[5.2.1.$0^{2,6}$]decadienones. Their use in the synthesis of cyclopentenoids and dihydrosarkomycins 1509
Lanzetta R. see Adinolfi M. 4435
Laronze J. Y. El Boukili R. Patigny D. Dridi S. Cartier D. and **Lévy J.** The rearrangement of some cyclopentanone-aryloximes: synthesis of (±)-aplysin, (±)-filiformin and of their debromo analogues 10003
Laronze J.-Y. El Boukili R. Royer D. and **Lévy J.** Methylene-indolines, indolenines and indoleniniums—XXII. The Fischer indolization of some substituted cyclopentanones 4915
Lasek W. see Makosza M. 2843
Laurent E. Marquet B. et **Tardivel R.** Etude de la régiosélectivité en fluoration anodique de dérivés benzyliques 3969
Lavaud C. see Quader Md. A. 3611
Lavergne J.-P. see Chaari M. 4619
Leboff A. see Alazard J.-P. 9195
Lebrun A. see Landais Y. 3787
Ledl F. see Kettner B. 9351
Lee J. see Liotta L. J. 2433
Lee K. see Lee W. S. 8091
Lee N. K. see Kitagawa I. 2169
Lee S. K. see Dolbier W. R. 2065
Lee T. V. Porter J. R. and **Roden F. S.** The use of a combined annulation–ring cleavage strategy for the novel synthesis of seven, eight and nine-membered rings 139
Lee W. S. Lee K. Nam K. D. and **Kim Y. J.** Rearrangement mechanisms of 1,3-dithiolane sulfoxides 8091
Lee Y. B. see Krow G. R. 8499
Lefeber A. W. M. see Dreef C. E. 4709
Legters J. Thijs L. and **Zwanenburg B.** Synthesis of naturally occurring (2*S*,3*S*)-(+)-aziridine-2,3-dicarboxylic acid 5287
Lemos A. see Clarke S. J. 5615
Leon-Ruaud P. and **Plusquellec D.** Synthèse de nouveaux tensioactifs glycosidiques par l'intermédiaire de sucres halogènes. Thioéthers et sulfones dérivés de l'α-D-glucoside et l'α-D-mannoside de méthyle 5185
Leonard K. J. see Markgraf J. H. 183
Leone M. see Colonna S. 8385
Lerche H. see Kettner B. 9351
Lerner R. A. see Janda K. D. 2503
Lesieur D. see Aichaoui H. 6649
Leterme A. see Defrancq E. 5725
Levacher V. Benoit R. Duflos J. Dupas G. Bourguignon J. and **Queguiner G.** Broadening in the scope of NADH models by using chiral and non chiral pyrrolo [2,3-*b*] pyridine derivatives 429
Lévai A. see Tóth G. 8119
Lévy J. see Laronze J. Y. 10003
Lévy J. see Laronze J.-Y 4915
Lew G. see Negishi E. 343
Lewall B. see Papadopoulos A. 563
Ley S. V. Anderson J. C. Blaney W. M. Morgan E. D. Sheppard R. N. Simmonds M. S. J. Slawin A. M. Z. Smith S. C. Williams D. J. and **Wood A.** Chemistry of insect antifeedants from *Azadirachta indica*—XI. Characterisation and structure activity relationships of some novel rearranged azadirachtins 9231
Ley S. V. see Anderson J. C. 6813
Ley S. V. see Bates R. W. 9929
Ley S. V. see Brown D. S. 1311
Ley S. V. see Brown D. S. 1329
Ley S. V. Trudell M. L. and **Wadsworth D. J.** The total synthesis of agglomerin A and (±)-carolinic acid. A general method for the preparation of 3-acyl tetronic acids via direct acylation of *O*-methyl 3-stannyl tetronates 8285
Lhomme J. see Defrancq E. 5725
Lhomme M.-F. see Defrancq E. 5725
Lhoste P. see Sutowardoyo K. I. 1435
Li L. see Baeckström 6521
Li L. see Baeckström 6533
Licini G. see Annunziata R. 3869
Liebeskind L. S. see Shawe T. T. 5643

Liesch J. M. see Hensens O. D. 3915
Lightner D. A. see Byun Y.-S. 9759
Lightner D. A. see Ma J.-S. 3719
Lightner D. A. see Pu Y.-M. 6163
Lightner D. A. see Trull F. R. 1945
Likhite S. M. see Gopalakrishnan V. 1075
Lille Ü. see Martin I. 3999
Lin Y.-T. see Cheng M.-C. 4861
Linstrumelle G. see Avignon-Tropis M. 7279
Liotta L. J. Lee J. and **Ganem B.** Effect of 1-epoxyalkyl-1-deoxynojirimycins on exoglucosidases 2433
Lippolis V. see Rossi R. 8443
Liptaj T. see Bernát J. 4665
Little R. D. see Amputch M. A. 383
Liu R. S. H. see Colmenares L. U. 3711
Llavona L. see Barluenga J. 7875
Lloris M. E. Gálvez N. Marquet J. and **Moreno-Mañas M.** Reactions of copper(II) β-diketonates under free radical conditions. Preparation of highly congested β-diketones 8031
Lloris M. E. see Moreno-Mañas M. 6511
Lloyd M. D. see Baldwin J. E. 4089
Lloyd-Williams P. Gairí M. Albericio F. and **Giralt E.** Convergent solid-phase peptide synthesis—X. Synthesis and purification of protected peptide fragments using the photolabile Nbb-resin 9867
Lönnberg H. see Glemarec C. 6689
Looney M. G. see Curtis N. R. 7171
Loosen P. K. Khorasani M. F. Toppet S. M. and **Hoornaert G. J.** Cycloadducts of ethene with 2(1*H*)-pyrazinones functionalisation and reduction to 2,5-diazabicyclo[2.2.2]octan-3-ones 9269
Loosen P. K. Tutonda M. G. Khorasani M. F. Compernolle F. and **Hoornaert G. J.** Cycloadducts of ethene with 2(1*H*)-pyrazinones and their conversion into 2,5-diazabicyclo[2.2.2]octan-3,6-diones 9259
López-Lázaro A. see Molina P. 6747
Lorenc L. B. Juranic I. O. Dabovic M. M. and **Mihailovic M. Lj.** Non-sensitized photooxygenation of some steroidal isoxazolidines 6389
Lorenzo A. see Molina P. 6737
Loreto M. A. see Fioravanti S. 5877
Lorne R. see Baudin J.-B. 6655
Loubinoux B. see Didier E. 4941
Loubinoux B. and **Gerardin P.** Protection des acides par les groupements ABz; utilisation en synthèse peptidique 239
Lounasmaa M. and **Karvinen E.** Stereochemical course of the modified Polonovski reaction and mercuric acetate oxidation in the preparation of 22-substituted 1,2,3,4,6,7,12,12*b*-octahydroindolo[2,3-*a*]quinolizines 6371
Lounasmaa M. and **Tamminen T.** Stereoselective preparation of indoloquinolizidine N-oxides: predominant conformations 2879
Lovely C. J. see Jennings W. B. 5561
Lübben S. see Martens J. 1205
Luboch E. Cygan A. and **Biernat J. F.** Bis(benzocrown ether)s with polymethylene bridges and their application in ion-selective electrodes 4101
Lucas M. see Baud M.-V. 9993
Luis S. V. and **Burguete M. I.** The Fischer indole synthesis of 8-methyl-5-substituted-1-oxo-β-carbolines: a remarkable high yield of a [1,2]-methyl migration 1737
Lukin K. A. Masunova A. Yu. Ugrak B. I. and **Zefirov N. S.** The synthesis of bismethylene derivatives of triangulanes 5769
Lunazzi L. Casarini D. Cremonini M. A. and **Anderson J. E.** The effect of exocyclic conjugation on the inversion of a saturated six-membered ring. A dynamic NMR study of N-substituted morpholines 7465
Lunazzi L. Placucci G. and **Macciantelli D.** Stereodynamics and conformation of furan-3-aldehyde and of its corresponding furoyl σ-radical 6427
Lunazzi L. Placucci G. and **Macciantelli D.** The conformational preferences of isomeric naphthaldehydes as determined by NOE experiments 9125
Lusis V. Muceniece D. Stonkuss V. and **Duburs G.** Synthesis and isomerization of 1H-4,4a,5,9b-tetrahydroindeno[1,2-*b*]pyridines 7429
Luu B. see Dolle F. 7059
Luu B. see Dolle F. 7067
Lynch M.-J. see Haaima G. 5203
Lyons A. G. see Nair V. 8949
Ma J.-S. and **Lightner D. A.** Restricted bond rotation and fluorescence following photoexcitation of dipyrrinones 3719
Ma P. see Osawa E. 4579
Ma Y.-X. see Beaton G. 2377
Maas G. see Vilsmaier E. 8133
Macciantelli D. see Lunazzi L. 6427
Macciantelli D. see Lunazzi L. 9125
Maccioni A. see Landini D. 7477
Machida S. Hashimoto Y. Saigo K. Inoue J. and **Hasegawa M.** The highly *syn*-selective Michael reaction of enamines with 2-(1-alkenyl)-1,3-dioxolan-2-ylium cations generated from 2,2-dimethoxyethyl 2-alkenoates *in situ* 3737
Macicek J. see Georgieva A. 3375
MacKenzie L. see Carte' B. K. 1815
MacLeod A. M. see Ramage R. 5625
MacMillan A. M. and **Verdine G. L.** Engineering tethered DNA molecules by the convertible nucleoside approach 2603
Madadi N. see Vanelle P. 5173
Maeda H. see Ohmori H. 767
Maeda K. see Suga A. 1191
Maehara A. see Danda H. 8701
Maekawa H. see Shono T. 593
Maekawa N. see Komatsu K. 6951
Maestro M. C. de Ancos B. 3171
Maggs J. L. see Page P. C. B. 2871
Magot-Cuvru A. Blanco L. and **Drouin J.** Conjugate addition of Grignard reagents to α,β-unsaturated esters: preparation of alkylsilylketeneacetals 8331
Mahajan M. P. see Mazumdar S. N. 1473
Mahato S. B. Sahu N. P. Roy S. K. and **Sen S.** Structure elucidation of four new triterpenoid oligoglycosides from *Anagallis arvensis* 5215
Mahiou B. see Smith R. J. 933
Mahon M. F. see Sainsbury M. 4195
Maia A. see Landini D. 1285
Maia A. see Landini D. 7477
Maia J. G. S. see de S. Pereira A. C. 5637
Maillo L. C. see Valls N. 1065
Main L. see Adams C. J. 4959
Main L. see Adams C. J. 4979
Majumder P. L. and **Basak M.** Novel oxidative phenol-coupling reaction with phosphomolybdic acid on silica gel support: regioselective biomimetic synthesis of dimeric phenanthrene derivatives 8601

Makhova I. V. see Nikishin G. I. 895
Maki T. see Ohmori H. 767
Makosza M. and **Kwast A.** Vicarious nucleophilic substitution of hydrogen in electrophilic alkenes 5001
Makosza M. and **Lasek W.** Cocatalysis in phase-transfer catalyzed β-elimination reactions 2843
Malakov P. Y. de la Torre M. C. Rodríguez B. and **Papanov G. Y.** Some chemical transformations of the *neo*-clerodane diterpene teubotrin 10129
Maldonado J. see Vanelle P. 5173
Maillát T. Bodnár Zs. and **Petró J.** Reduction by dissolving bimetals 441
Malone J. F. see Grigg R. 8297
Malpartida F. see Sherman D. H. 6029
Mamdapur V. R. see Ghosh S. K. 3089
Mandal A. B. see Kasturi T. R. 5245
Mangeney P. see Alexakis A. 1677
Manhas M. S. see Bose A. K. 5379
Manimekalai P. see Karunakaran C. 8733
Manly C. J. see Piehler L. T. 2423
Mann I. S. Widdowson D. A. and **Clough J. M.** Transition metal mediated synthesis of moracin M, a phytoalexin of *Morus alba* Linn 7981
Mann I. S. Widdowson D. A. and **Clough J. M.** Transition metal directed synthesis of some prenylated phytoalexin of *Morus alba* Linn 7991
Mann J. see Billington S. 5231
Manogaran S. see Tarakeshwar P. 297
Marcelis A. T. M. see Stolle W. A. W. 1753
Marchand A. P. Annapurna P. Taylor R. W. Simmons D. L. Watson W. H. Kashyap R. P. Nagl A. Flippen-Anderson J. L. Gilardi R. and **George C.** Corrigenda 907
Marchand A. P. Ngooi T.-K. Watson W. H. and **Kashyap R. P.** *Endo*-tricyclo[6.2.1.$0^{2,7}$]undec-9-ene-3,6-dione: a versatile synthetic intermediate 961
Marchetti V. see Cavicchio G. 9439
Marciano C. E. see Adinolfi M. 4435
Marco M. P. see Rubiralta M. 5585
Marco-Contelles J. and **Martínez-Grau A.** Carbocycles from carbohydrates: synthesis of some poly-functionalized cyclohexane derivatives. Preparation of useful chiral building blocks 7663
Marcos A. Pedregal C. and **Avendaño C.** Reactivity of 4(7)-aminobenzimidazole as a bidentate nucleophile 7459
Marcotullio M. C. see Ceccherelli P. 4211
Marcotullio M. C. see Ceccherelli P. 7403
Marczak A. see Ashworth P. 9939
Marek I. see Alexakis A. 1677
Marinelli F. see Arcadi A. 1525
Marini-Bettolo G. B. Galeffi C. Multari G. Palazzino G. and **Messana I.** Research on African medicinal plants—XXVII. Interjectin, a derivative of nyasicoside from *Hypoxis interjecta* and *Hypoxis multiceps* 6717
Markandu J. see Grigg R. 4007
Markgraf J. H. Davis H. A. Ernst P. S. Hirsch K. S. Leonard K. J. Morrison M. E. and **Myers C. R.** Strained heterocyclic systems—XIX. 1-Azatriptycene and derivatives 183
Marks V. see Frimer A. A. 8361
Marquet A. see Dubois J. 1001
Marquet A. see Viger A. 7309
Marquet B. see Laurent E. 3969
Marquet J. see Lloris M. E. 8031
Marquet J. see Moreno-Mañas M. 6511
Marquez A. see Rodriguez H. 5681
Marra A. Gauffeny F. and **Sinaÿ P.** A novel class of glycosyl donors: anomeric *S*-xanthates of 2-azido-2-deoxy-D-galactopyranosyl derivatives 5149
Marsh A. see Craig D. 3095
Marson C. M. Benzies D. W. M. and **Hobson A. D.** Stereocontrolled syntheses of hydroxylated tricyclic systems by a new annulation of 2-cyclohexen-1-one 5491
Marson C. M. see Giles P. R. 1303
Martell A. E. see Chen D. 6895
Martell A. E. see Sun Y. 357
Martell A. E. see Sun Y. 8863
Martelli G. see Andreoli P. 9061
Martens J. Kintscher J. und **Arnold W.** Synthese und Stereochemie von neuen 2-substituierten 4-Thiazolidinylessigsäuren 7029
Martens J. und **Lübben S.** Enantiomerenreine bicyclische Pyrrolidin-Derivate: Herstellung und Verwendung in asymmetrischen Synthesen 1205
Martín A. see Nakano T. 2957
Martin D. G. see Gnabre J. N. 3545
Martin I. Anvelt J. Pehk T. and **Lille Ü.** The synthesis of 16,16-dimethyl-15-keto-prostaglandin B_1 oligomers. The chemical structures of dimers 3999
Martín M. R. see de Ancos B. 3171
Martínez A. see Amate Y. 5811
Martínez A. see García-Granados A. 91
Martínez A. see Moreno-Mañas M. 6511
Martínez de Marigorta E. see Domínguez E. 9253
Martinez E. see Sherman D. H. 6029
Martinez-Grau A. see Marco-Contelles J. 7663
Martins F. J. C. Viljoen A. M. Coetzee M. Fourie L. and **Wessels P. L.** The influence of hydrate formation on the Clemmensen reduction of pentacyclo[5.4.0.$0^{2,6}$.$0^{3,10}$.$0^{5,9}$]undecane-8,11-dione and pentacyclo[6.4.0.$0^{2,7}$.$0^{3,11}$.$0^{6,10}$]dodecane-9,12-dione 9215
Martins F. J. C. Viljoen A. M. Strydom S. J. Fourie L. and **Wessels P. L.** Photolysis of 3,3'-diamino-2,2'-bi-1,4-naphthoquinonyl 8373
Maruoka K. Ooi T. Nagahara S. and **Yamamoto H.** Organoaluminum-catalyzed rearrangement of epoxides; a facile route to the synthesis of optically active β-siloxy aldehydes 6983
Masamune S. see Osawa E. 4579
Mascareñas J. L. Sarandeses L. A. Castedo L. and **Mouriño A.** Palladium-catalysed coupling of vinyl triflates with enynes and its application to the synthesis of 1α,25-dihydroxyvitamin D_3 3485
Massiot G. see Nuzillard J.-M. 3655
Massiot G. see Quader Md. A. 3611
Masuda H. see Shono T. 593
Masui M. see Ohmori H. 767
Masunova A. Y. see Lukin K. A. 5769
Mata J. M. see Carreño M. C. 605
Mathey F. see Nief F. 6673
Matia M. P. Ezquerra J. Sánchez-Ferrando F. García-Navío J. L. Vaquero J. J. and **Alvarez-Builla J.** New uses of the Westphal condensation. Synthesis of pi-donor–pi-acceptor heterocycles 7329

Matsubara S. see Kimura M. 867
Matsubara Y. see Shundo R. 831
Matsumoto T. see Teshima T. 3305
Matsunaga S. Fujiki H. Sakata D. and **Fusetani N.** Calyculins E,F,G, and H, additional inhibitors of protein phosphatases 1 and 2A, from the marine sponge *Discodermia calyx* 2999
Matsunaga S. see Yoshida J. 615
Matsuzawa T. see Kakinuma K. 6975
Mattinen J. see Pihlaja K. 4031
Matveyev Yu. I. Gorbatenko V. I. and **Samarai L. I.** 1,1-Dihaloalkyl heterocumulenes: synthesis and reactions 1563
Mauleón D. see García M. L. 10023
Mavel S. see Gramain J.-C. 7287
Mawer I. M. see Vacca J. P. 907
Maxwell J. R. see Prowse W. G. 1095
Maybhate S. P. Deshmukh A. R. A. S. and **Rajappa S.** Synthesis of tautomerism of 1-arylsulfonamido-1-methylthio-2-nitroethylenes: conversion to N-arylsulfonyl nitroacetamides 3887
Mayr H. see Irrgang B. 219
Mazumdar S. N. and **Mahajan M. P.** [4+2] Cycloaddition reactions of various 1,3-diaza-1,3-butadienes with ketenes 1473
Mazzoni O. see Bolognese A. 7417
McCall C. J. see Yates P. C. 6493
McCullough D. W. Bhupathy M. Piccolino E. and **Cohen T.** Highly efficient terpenoid pheromone syntheses via regio- and stereocontrolled processing of allyllithiums generated by reductive lithiation of allyl phenyl thioethers 9727
McDonald B. see Julia M. 6939
McFarlane I. M. see France C. J. 6381
McLaughlin J. L. see Fang X. 9751
McLaughlin J. L. see Saad J. M. 2751
McLean S. see Tinto W. F. 8679
McLeod D. A. see Janda K. D. 2503
McMackins D. E. see Coleman J. P. 809
McMahon J. B. see Gustafson K. R. 4547
McPartlin M. see Hutchings M. G. 7869
Meehan T. see Jhingan A. K. 1621
Meekel A. A. P. see Brands K. M. J. 2005
Meerpoel L. Toppet S. M. Compernolle F. and **Hoornaert G. J.** An approach to acyclo-1-deazathymidine C-nucleosides via 3,5-dichloro-6-methyl-2*H*-1,4-oxazin-2-one 10065
Mehta G. Reddy S. H. K. and **Padma S.** Synthetic studies towards prismanes: exploratory efforts en route to [7]-prismane homo- and secologues 7821
Mehta G. and **Padma S.** Synthetic studies towards prismanes: 1,4-bishomo-[6]-prismane ('Garudane') 7807
Mehta G. and **Padma S.** Synthetic studies towards prismanes: seco-[6]-prismane 7783
Mella M. Fasani E. and **Albini A.** The photosensitized dimerization of 1,3-cyclohexadiene 3137
Mella M. see d'Alessandro N. 5043
Mellor M. and **Osbourn S. E.** An unexpected rearrangement of 4-bromo-2(3*H*)-benzothiazolones 2255
Mencarelli P. see Doddi G. 1977
Meng Q. and **Hesse M.** Synthetic approaches toward glidobamine, the core structure of the glidobactin antibiotics 6251
Menichetti S. see Capozzi G. 7185
Mérand Y. see Poirier D. 7751
Merchant J. R. see Dike S. Y. 4775
Merényi R. see Bienfait B. 8167
Mereyala H. B. and **Reddy G. V.** Directed, iterative, stereoselective synthesis of oligosaccharides by use of suitably 2-*O*-substituted 2-pyridyl 1-thioglycopyranosides on activation by methyl iodide 9721
Mereyala H. B. and **Reddy G. V.** Stereoselective synthesis of α-linked saccharides by use of per *O*-benzylated 2-pyridyl 1-thio hexopyranosides as glycosyl donors and methyl iodide as an activator 6435
Merlin P. Braekman J. C. and **Daloze D.** Stereoselective total synthesis of (±)-tetraponerine-8 3805
Merritt J. E. see Snider B. B. 8663
Messana I. see Chifundera K. 4369
Messana I. see Marini-Bettolo G. B. 6717
Messeguer A. Sánchez-Baeza F. Casas J. and **Hammock B. D.** Use of dimethyldioxirane in the preparation of epoxy derivatives related to insect juvenile hormones 1291
Mestres R. see Aurell M. J. 1997
Metni M. R. see Abarca B. 5277
Meuer H. see Frischmuth K. 9793
Meurs J. H. H. and **Eilenberg W.** Oxidative fluorination in amine–HF mixtures 705
Meyers A. I. see Romo D. 9503
Miginiac L. see Guyot B. 3981
Migliuolo A. Piccialli V. and **Sica D.** Structure elucidation and synthesis of 3β,6α-dihydroxy-9-oxo-9,11-seco-5α-cholest-7-en-11-al, a novel 9,11-secosterol from the sponge *Spongia officinalis* 7937
Mihailovic M. Lj. see Lorenc L. B. 6389
Mihailovic M. Lj. see Vukicevic R. 859
Mikami K. see Kishi N. 8111
Mikami Y. Purealidins B and C, new bromotyrosine alkaloids from the Okinawan marine sponge *Psammaplysilla purea* 6617
Mikami Y. see Kobayashi J. 6617
Milgrom L. R. and **Flitter W. D.** Corrigendum 9129
Milgrom L. R. and **Flitter W. D.** Facile aerial oxidation of a porphyrin—VIII. Decay of radical formed during the aerial oxidation of *meso*-tetrakis(3,5-di-*t*-butyl-4-hydroxyphenyl)porphyrin 7683
Millar K. see Billington S. 5231
Millard J. T. see Hopkins P. B. 2475
Miller M. J. see Gasparski C. M. 5367
Miller M. J. see Gasparski C. M. 8461
Millican A. see Billington S. 5231
Minisci F. see Coppa F. 7343
Mio S. Ichinose R. Goto K. Sugai S and **Sato S.** Synthetic studies on (+)-hydantocidin—I. A total synthesis of (+)-hydantocidin, a new herbicidal metabolite from microorganism 2111
Mio S. Kumagawa Y. and **Sugai S.** Synthetic studies on (+)-hydantocidin—III. A new synthetic method for construction of the spiro-hydantoin ring at the anomeric position of D-ribofuranose 2133
Mio S. Shiraishi M. Sugai S. Haruyama H. and **Sato S.** Synthetic studies on (+)-hydantocidin—II. Aldol addition approaches toward the stereoisomers of (+)-hydantocidin 2121
Mio S. Ueda M. Hamura M. Kitagawa J. and **Sugai S.** Synthetic studies on (+)-hydantocidin—IV. Synthesis of stereoisomers of (+)-hydantocidin 2145

Miranda M. A. see Climent M. J. 9289
Mironenko D. A. see Solodenko V. A. 3989
Mitchell M. B. see Baldwin J. E. 5901
Miura K. see Sakatsume O. 8717
Miyake A. see Tadano K. 7259
Miyamoto T. see Tokuda M. 747
Mizsak S. A. see Ghosh A. 8653
Mizsak S. A. see Gnabre J. N. 3545
Modric N. see Popovic T. 317
Modro T. A. see Vuorinen E. 8611
Moeller K. D. Rothfus S. L. and **Wong P. L.** Anodic amide oxidation: fundamental studies concerning the annulation of six- and seven-membered rings onto amines 583
Mojarrad F. see Abarca B. 5277
Molina P. Alajarin M. and **López-Lázaro A.** Regioselective iminophosphorane-mediated annelation of a 1,3,4-thiadiazole ring into a 1,2,4-triazine ring: preparation of novel mesoionic compounds derived from [1,3,4]thiadiazolo[2,3-*c*]- and [1,3,4]thiadiazolo[3,2-*d*][1,2,4]triazines 6747
Molina P. Aller E. and **Lorenzo A.** Pyrido annelation reaction by a tandem aza Wittig/electrocyclic ring-closure strategy: preparation of pyrazolo[4,3-*c*)- and pyrazolo[3,4-*c*]pyridine derivatives 6737
Molina P. Iminophosphorane-mediated synthesis of fused carbazoles. A facile one-pot preparation of 7*H*-pyrido[4,3-*c*]carbazole and 10*H*-pyrido[3,4-*b*]carbazole derivatives 4175
Molloy R. M. see Bonjouklian R. 7739
Moloney M. G. see Baldwin J. E. 155
Moloney M. G. see Baldwin J. E. 5603
Momose T. see Takahata H. 7635
Monaco P. see Greca M. D. 7129
Monegier du Sorbier B. see Fréchet D. 61
Moneta W. Baret P. Dutasta J.-P. et **Pierre J.-L.** Etude en solution d'un iminocyclophane macrocyclique porteur de quatre groupements methoxyles convergents: oligomérisation spontanée et réversible et absence d'epimérisation 1425
Montchamp J.-L. see Piehler L. T. 2423
Montiel V. see Sanchez-Cano G. 877
Moolweer H. H. Hiemstra H. and **Speckamp W. N.** Total synthesis of (±)-α-allokainic acid via two allylsilane *N*-acyliminium ion reactions 3451
Moore R. E. see Bonjouklian R. 7739
Moore R. E. see Carmeli S. 2087
Moore R. E. see Mori Y. 4889
Moran P. J. S. see de Carvalho M. 2073
Moreno-Mañas M. González A. Jaime C. Lloris M. E. Marquet J. Martínez A. Siani A. C. Vallribera A. Hernández-Fuentes I. Rey-Stolle M. F. and **Salom C.** Preparation and conformational analysis of severely hindered β-diketones. Dipole moment determinations and theoretical calculations 6511
Moreno-Mañas M. see Lloris M. E. 8031
Morera E. see Ciattini P. G. 6449
Morgan B. Oehlschlager A. C. and **Stokes T. M.** Enzyme reactions in apolar solvents. The resolution of branched and unbranched 2-alkanols by porcine pancreatic lipase 1611
Morgan D. R. see Baldwin J. E. 5603
Morgan E. D. see Ley S. V. 9231
Morgan P. see Page P. C. B. 2871
Morgó I. see Bosch J. 5269
Mori K. and **Takikawa H.** A new synthesis of the enantiomers of ipsdienol, the pheromone of the *Ips* bark beetles 2163
Mori K. see Kitahara T. 1649
Mori K. see Kitahara T. 6999
Mori M. Kagechika K. Sasai H. and **Shibasaki M.** New synthesis of 4-acetoxy-2-azetidinones by use of electrochemical oxidation 531
Mori S. Ohno T. Harada H. Aoyama T. and **Shioiri T.** New methods and reagents in organic synthesis—CII. A stereoselective synthesis of tillvalline and its analogs 5051
Mori Y. Kohchi Y. Noguchi H. Suzuki M. Carmeli S. Moore R. E. and **Patterson G. M. L.** 4889
Morita H. Kondo K. Hitotsuyanagi Y. Takeya K. Itokawa H. Tomioka N. Itai A. and **Iitaka Y.** Conformational analysis of antitumor cyclic hexapepetides, RA series 2757
Morita H. see Itokawa H. 7007
Morrison M. E. see Markgraf J. H. 183
Morrow G. W. Chen Y. and **Swenton J. S.** Intramolecular cyclization of 2'-olefinic side-chains on anodically oxidized 4-phenylphenols. The effect of olefin substituents on carbon-carbon bond formation 655
Mortishire-Smith R. J. Nutkins J. C. Packman L. C. Brodey C. I. Rainey P. B. Johnstone K. and **Williams D. H.** Determination of the structure of an extracellular peptide produced by the mushroom saprotroph *Pseudomonas reactans* 3645
Mortlock A. A. see Bodwell G. J. 10077
Mosher H. S. see Cheng M.-C. 4861
Moshuber J. see Haider N. 8573
Moulines J. see Nuhrich A. 3075
Moumni E. M. see Selve C. 411
Mouriño A. see Mascareñas J. L. 3485
Mouton C. H. L. see Steenkamp J. A. 6705
Mowlem T. J. see Dickens M. J. 8621
Moyano A. see Almansa C. 5867
Muceniece D. see Lusis V. 7429
Mueller-Westerhoff U. T. Vance B. and **Yoon D. I.** The synthesis of dithiolene dyes with strong near-IR absorption 909
Mukai C. Cho W. J. Kim I. J. Kido M. and **Hanaoka M.** Asymmetric aldol reaction: a highly *erythro*-selective aldol reaction between tricarbonyl(*o*-trimethylsilylbenzaldehyde derivative)-chromium(O) complexes and cyclic silyl enol ethers 3007
Mukopadhyay S. see Chakravarty A. K. 2337
Müller F. see Franken H.-D. 7593
Muller N. Electrochemical synthesis of *cis*-3,4-bis(2,2,2-trifluoroethyl)pyrrolidine 549
Müller R. von Philipsborn W. Schleifer L. Aped P. and **Fuchs B.** Structure, conformation, and stereoelectronics of 1,4,5,8-tetraazadecalins. Chemical, multinuclear NMR and molecular mechanics studies 1013
Multari G. see Marini-Bettolo G. B. 6717
Munier P. see Viala J. 3347
Munk S. A. see Boger D. L. 2661
Munro M. H. G. see Gustafson K. R. 4547
Muqtar M. see Al-Husaini A. H. 7719
Murakoshi I. see Saito K. 5955
Murata T. see Yoshida J. 615
Muratake H. Okabe K. and **Natsume M.** Synthesis of teleocidins A, B and their congeners—II. Synthesis of lyngbyatoxin A (teleocidin A-1), teleocidin A-2, pendolmycin, and (*R,E*)- and (*S,E*)-7-(3,7,11-

trimethyl-1,6,10-dodecatrien-3-yl)-(–)-indolactams V 8545
Muratake H. see Okabe K. 8559
Muratake H. and **Natsume M.** Synthesis of teleocidins A–B and their congeners—I. An efficient synthesis method of *N*-(7-alkyl-4-indolyl)-*N*-methyl-L-valine esters, essential intermediates for teleocidin synthesis 8535
Murayama E. see Sato T. 3281
Murphy J. A. see Begley M. J. 8417
Murphy J. A. and **Sherburn M. S.** Intramolecular free-radical substitution of pyridinium rings 4077
Myers C. R. see Markgraf J. H. 183
Myint S. H. see Cortes D. 8195
Mynderse J. S. see Sanson D. R. 3633
Nadji S. see Taylor J.-S. 2579
Nagahara S. see Maruoka K. 6983
Naganawa H. see Takahashi A. 3621
Nagarathnam D. and **Cushman M.** A practical synthesis of flavones from methyl salicylate 5071
Nagashima S. see Sato M. 7271
Nagata K. see Itoh T. 4317
Nagatomi T. see Danda H. 8701
Nagl A. see Marchand A. P. 907
Naik R. H. see Kulkarni G. H. 1249
Naik V. G. see Sonawane H. R. 8259
Nair V. Lyons A. G. and **Purdy D. F.** Novel dideoxynucleoside isosteres 8949
Nair V. and **Purdy D. F.** Synthetic approaches to new doubly modified nucleosides: congeners of cordycepin and related 2'-deoxyadenosine 365
Nájera C. Pérez-Pinar A. and **Sansano J. M.** A simple method for the synthesis of γ-functionalized vinyl and allyl sulfones 6337
Nájera C. and **Sansano J. M.** β,γ-Epoxy sulfones in organic synthesis—II. Preparation of β,γ-bifunctionalized sulfones 5193
Nakagawa M. see Torisawa Y. 8067
Nakai T. see Kishi N. 8111
Nakajima T. see Teshima T. 3305
Nakamura E. see Aoki S. 3935
Nakamura T. see Shigemori H. 8529
Nakano T. Martin A. and **Alonso M.** *Buxus* alkaloids—XI. The synthesis of cycloprotobuxine-A (3β,20*S*-chirality) and its two isomeric alkaloids with 3β,20*R*-and 3α,20*R*-configuration from lanosterol 2957
Nakatsukasa W. M. see Sanson D. R. 3633
Nakazono Y. see Fukusaki E. 6223
Naldi R. E. see Oyler A. R. 6549
Nam K. D. see Lee W. S. 8091
Napolitano A. see Crescenzi O. 6243
Naruse Y. see Ruzziconi R. 4603
Nash R. J. see de S. Pereira A. C. 5637
Natchev I. A. Organophosphorus analogues and derivatives of the natural L-aminocarboxylic acid and peptides—VII. Enzyme synthesis of phospha-C peptides 1239
Natsume M. see Muratake H. 8535
Natsume M. see Muratake H. 8545
Natsume M. see Okabe K. 7615
Natsume M. see Okabe K. 8559
Naumski R. see Šuškovic B. 8407
Navarro M. De Giovani W. F. and **Romero J. R.** Selectivity in catalytic diol electrooxidation using a polypyridine Ru(IV) complex 851
Naylor A. see Sainsbury M. 4195
Nayyar N. K. see Iqbal J. 6457
Negishi E. Yoshida T. Abramovitch A. Lew G. and **Williams R. M.** Highly stereoselective syntheses of conjugated *E,E*- and *E,Z*-dienes, *E*-enynes and *E*-1,2,3-butatrienes via alkenylborane derivatives 343
Nelofer A. see Atta-ur-Rahman 3129
Nelson L. A. K. Shaw A. C. and **Abrams S. R.** Synthesis of (+)-, (–)- and (±)-7'-hydroxyabscisic acid 3259
Nemeroff N. H. see Joullié M. M. 8791
Ner S. K. see Equi A. M. 507
Neri P. see Caccamese S. 10101
Nerinckx W. De Clercq P. J. Couwenhoven C. Overbeek W. R. M. and **Halkes S. J.** An improved synthesis of 1α-hydroxy vitamin D_3 9419
Netscher T. and **Weiler T.** The TDE sulfenyl group as a protective group for amines 8145
Neuman A. see Aranda G. 8339
Newton C. G. see France C. J. 6381
Newton M. G. see Ross S. A. 9585
Ngadjui B. T. Ayafor J. F. Sondengam B. L. Connolly J. D. and **Rycroft D. S.** Hoslundin, hoslundal and hoslunddiol: three new flavonoids from the twigs of *Hoslundia opposita* (Lamiaceae) 3555
Ngooi T.-K. see Marchand A. P. 961
Nicholson N. see Baldwin J. E. 4089
Nicoll-Griffith D. A. and **Weiler L.** Introduction of a chiral centre on C-6 of a carbohydrate unit: application to the synthesis of the C-2 to C-15 fragment of ionomycin 2733
Nief F. and **Mathey F.** New reactivity of phosphirenes (phosphacyclopropenes). Synthesis of allenylphosphines and of functional phosphirenes 6673
Nieger M. see Papadopoulos A. 563
Nielsen J. see Beaton G. 2377
Nielsen J. W. see Gnabre J. N. 3545
Nieman R. A. see Pettit G. R. 3601
Nifantyev E. E. Gratchev M. K. Burmistrov S. Yu. Vasyanina L. K. Antipin M. Yu. and **Struchkov Y. T.** Nature of acid-catalyzed alcoholysis of amides of trivalent-phosphorus acids 9839
Nighat F. see Atta-ur-Rahman 3129
Nihira T. see Nishida T. 6623
Niibo Y. see Otera J. 7625
Nikishin G. I. Elinson M. N. and **Makhova I. V.** Electrochemical oxidation of ketones in methanol in the presence of alkali metal bromides 895
Nikishin G. I. see Strelenko Y. A. 9455
Nilsson M. see Bergdahl M. 9691
Nishi T. see Kitahara T. 6999
Nishibata Y. and **Itai A.** Automatic creation of drug candidate structures based on receptor structure. Starting point for artificial lead generation 8985
Nishida K. see Sato T. 3281
Nishida T. Nihira T. and **Yamada Y.** Facile synthesis of racemic 2-hexyl-3-hydroxy-4-pentanolide (NFX-2) and its optical resolution 6623
Nishiguchi I. see Shundo R. 831
Nishio T. Nishiyama T. and **Omote Y.** Photooxygenation of pteridin-2,4,7-triones 2979
Nishitani T. see Yamazaki H. 541
Nishiyama T. see Nishio T. 2979
Nitz S. see Spraul M. H. 3037
Niwa H. Yoshida Y. Hasegawa T. and **Yamada K.** Total synthesis of (±)-(*Z*)-9-(bromomethylene)-1,5,5-

(bromomethylene)-1,5,5-trimethylspiro[5.5]undeca-1,7-dien-3-one, a brominated sesquiterpene of the chamigrane type 2155
Noguchi H. see Mori Y. 4889
Nogueira Barbosa M. C. see Coppa F. 7343
Nonaka T. see Konno A. 887
Normant J. F. see Alexakis A. 1677
Norris W. J. see Baldwin J. E. 457
Norte M. González A. G. Cataldo F. Rodríguez M. L. and **Brito I.** New examples of acyclic and cyclic C-15 acetogenins from *Laurencia pinnatifida*. Reassignment of the absolute configuration for *E* and *Z* pinnatifidienyne 9411
Norte M. González R. Fernández J. J. and **Rico M.** Okadaic acid: a proton and carbon NMR study 7437
Norte M. see Öztunç A. 2273
Novák J. see Bernát J. 4665
Novi M. see Dell'Erba C. 333
Novi M. see Petrillo G. 9297
Nozaki H. see Otera J. 7625
Nozaki H. see Sato T. 9773
Nozoe T. see Shono T. 593
Nuhrich A. and **Moulines J.** Cyclisation de *N*-tosyl oxiranes-propylamines: synthèse d'hétérocycles azotés 3075
Nuñez E. G. see Adam W. 3773
Nussabaumer P. Baumann K. Dechat T. and **Harasek M.** Highly selective TFAA-cleavage of tertiary 2,4-dimethoxybenzylamines and its use in the synthesis of secondary amines 4591
Nutkins J. C. see Mortishire-Smith R. J. 3645
Nuzillard J.-M. and **Massiot G.** Logic for structure determination 3655

Oberti R. see Burdisso M. 6725
Oda O. see Harashima S. 2773
Oehlschlager A. C. see Aksela R. 1163
Oehlschlager A. C. see Morgan B. 1611
Oehlschlager A. C. see Ramaswamy S. 1145
Oehlschlager A. C. see Ramaswamy S. 1157
Oehlschlager A. C. see Sharma S. 1177
Offen P. see Carte' B. K. 1815
Offen P. see Chen Y. 4869
Ogawa S. see Tadano K. 7259
Ogura T. see Kawai M. 2103
Ohba S. and **Engbersen J. F. J.** Synthesis of novel amphiphilic diacetylenes with amino or ammonium functionality 9947
Ohkubo M. see Yamamura S. 635
Ohmori H. Maeda H. Kikuoka M. Maki T. and **Masui M.** Electrochemical generation and reactions of acyloxytriphenyl-phosphonium ions 767
Ohno M. see Suga A. 1191
Ohno T. see Mori S. 5051
Ohsawa A. see Itoh T. 4317
Ohta H. see Sugai T. 7227
Ohta H. see Sugai T. 7237
Oishi Y. see Hataue I. 9317
Oivanen M. see Glemarec C. 6689
Okabe K. Muratake H. and **Natsume M.** Synthesis of teleocidins A, B and their congeners—III. Synthesis of dihydroteleocidin B-4 (dihydroteleocidin B), teleocidin B-3 and teleocidin B-4 8559
Okabe K. see Muratake H. 8545
Okabe K. and **Natsume M.** The second generation synthesis of a tumor promoter pendolmycin 7615
Okada M. see Itoh T. 4317
Okada S. see Uno H. 6231
Okada T. see Shono T. 593
Okami Y. see Takahashi A. 3621
Okamoto M. T. see de Carvalho M. 2073
Okamura K. see Yamazaki H. 541
Okano T. see Barton D. H. R. 1823
Okonogi A. see Yoshida T. 3575
Okuda T. see Yoshida T. 3575
Okumoto H. see Torii S. 665
Okuno Y. see Yamaura S. 635
Oliva A. see Branchadell V. 8775
Ollivierre H. see Jones G. 2851
Ollivierre H. see Jones G. 2861
Olsher U. Krakowiak K. E. Dalley N. K. and **Bradshaw J. S.** *syn*-Bishydroxymethyl-14-crown-4: a possible pre-organized molecule for simultaneous lithium complexation and anion solvation 2947
Olsson T. see Bergdahl M. 9691
Omar A. A. see de la Torre M. C. 3463
Omata T. see Fukusaki E. 6223
Omote Y. see Nishio T. 2979
Omura S. see Kakinuma S. 6059
O'Neil-Johnson M. see Crews P. 3585
Onorato M. E. see Amate Y. 5811
Onorato M. E. see García-Granados A. 91
Ooi T. see Maruoka K. 6983
Orena M. see Cardillo G. 2263
Ortar G. see Ciattini P. G. 6449
Ortí J. see Branchadell V. 8775
Ortuño R. M. see Alonso D. 5895
Ortuño R. M. see Branchadell V. 8775
Osawa E. Imai K. Fujiyoshi-Yoneda T. Jaime C. Ma P. and **Masamune S.** On the possibility of determining stereochemistry in acyclic polyhydroxylated compounds by the combined vicinal coupling constant/molecular mechanics method. A test with alditol peracetates 4579
Osbourn S. E. see Mellor M. 2255
O'Shea M. G. see DeVoss J. J. 1985
Oshima M. see Shimizu I. 2991
Otera J. Niibo Y. and **Nozaki H.** Oxirane ring-opening with alcohol catalyzed by organotin phosphate condensates. Complete inversion at tertiary and benzylic centers 7625
Otera J. see Sato T. 9773
Otsuka M. see Suga A. 1191
Ourisson G. see Arséniyadis S. 7045
Overbeek W. R. M. see Nerinckx W. 9419
Owji J. see Iranpoor N. 149
Oyler A. R. Naldi R. E. Facchine K. L. Burinsky D. J. Cozine M. H. Dunphy R. Alves-Santana J. D. and **Cotter M. L.** Characterization of autoxidation products of the antifungal compounds econazole nitrate and miconazole nitrate 6549
Öztunç A. Imre S. Wagner H. Norte M. Fernández J. J. and **González R.** A new haloether from *Laurencia* possessing a lauroxacyclododecane ring. Structural and conformational studies 2273
Packman L. C. see Mortishire-Smith R. J. 3645
Padma S. see Mehta G. 7783
Padma S. see Mehta G. 7807
Padma S. see Mehta G. 7821
Padwa A. and **Wannamaker M. W.** Preparation and reactivity of arylsulfonyl substituted cyclopropenes 6139
Page P. C. B. Hussain F. Bonham N. M. Morgan P. Maggs J. L. and **Park B. K.** Regioselective synthesis of A-ring halogenated derivatives of 17α-ethynyloestradiol 2871
Pahor B. see Šket B. 5029
Paladino J. see Cavelier-Frontin F. 9807
Palazzino G. see Marini-Bettolo G. B. 6717
Pale P. see Grandjean D. 1215

Palkovic A. see Popovic T. 317
Palumbo G. see Caputo R. 4187
Palvec J. Buet V. Grouiller A. Koole L. and **Chattopadhyaya J.** Structural studies on 1-(1-deoxy-β-D-psicofuranosyl)thymine 5847
Pandey A. see Iqbal J. 4143
Pandey G. Pooranchand D. and **Bhalerao U. T.** Photoinduced single electron transfer activation of organophosphines: nucleophilic trapping of phosphine radical cation 1745
Pandey R. K. Shiau F.-Y. Dougherty T. J. and **Smith K. M.** Regioselective syntheses of ether-linked porphyrin dimers and trimers related to Photofrin-II® 9571
Pandit U. K. see Brands K. M. J. 2005
Pandit U. K. see Huizenga R. H. 4155
Pandit U. K. see Huizenga R. H. 4165
Pandit U. K. see van den Bos J. C. 6787
Pandit U. K. see Vega E. 4361
Panfil I. Belzecki C. Urbanczyk-Lipkowska Z. and **Chmielewski M.** 1,3-Dipolar cycloaddition of nitrones to sugar enlactones 10087
Pantaloni A. see Frérot E. 259
Panunzio M. see Andreoli P. 9061
Papadopoulos A. Lewall B. Steckhan E. Ginzel K.-D. Knoch F. and **Nieger M.** Anodic oxidation of *N*-acyl and *N*-alkoxycarbonyl dipeptide esters as a key step for the formation of chiral heterocyclic synthetic building blocks 563
Papanov G. Y. see Malakov P. Y. 10129
Pappalardo L. see Tabcheh M. 4611
Parekh S. I. see Barton D. H. R. 1823
Park B. K. see Page P. C. B. 2871
Park G. see Williams R. M. 2629
Park T. K. Schroeder J. and **Rebek, Jr. J.** Convergent functional groups—XI. Selective binding of guanosine derivatives 2507
Parkkinen A. Fülöp F. and **Pihlaja K.** Formation of 1,3-perhydrobenzoxazines and their N-methyl derivatives. A comparative study 2229
Parkkinen A. see Pihlaja K. 4031
Parra A. see Garcia-Granados A. 9103
Parra M. see Aurell M. J. 1997
Parrilli M. see Adinolfi M. 4435
Parry R. J. and **Ju S.** The biosynthesis of sinefungin: investigations using a cell-free system 6069
Parsons A. F. see Baldwin J. E. 155
Parsons P. J. see Hodgson D. M. 4133
Pascard C. see Baudin J.-B. 3353
Pascard C. see Baudin J.-B. 6655
Pascual J. see García M. L. 10023
Pasquarello A. see Bernardi A. 7357
Pasta P. see Colonna S. 8385
Paterson I. see Bernardi A. 3471
Pathirana I. C. see Stout T. J. 3511
Patigny D. see Laronze J. Y. 10003
Patoiseau J. F. see Berrier C. 9629
Patterson G. M. L. see Bonjouklian R. 7739
Patterson G. M. L. see Carmeli S. 2087
Patterson G. M. L. see Mori Y. 4889
Pautard-Cooper A. and **Evans, Jr. S. A.** The regioselective and stereospecific substitution of unsymmetrical 1,2-diols using the 1,3,2λ^5-dioxaphospholane methodology 1603
Peakman T. M. ten Haven H. L. Rullkötter J. and **Curiale J. A.** Characterisation of 24-nor-triterpenoids occurring in sediments and crude oils by comparison with synthesized standards 3779
Peakman T. M. ten Haven H. L. Rullkötter J. and **Curiale J. A.** Corrigendum 8941
Pearce L. see de S. Pereira A. C. 5637
Pederson R. L. Esker J. and **Wong C.-H.** An improved synthesis of dihydroxyacetone phosphate 2643
Pedregal C. see Carmen Carreño M. 10035
Pedregal C. see Marcos A. 7459
Pedroso E. see Fernandez-Forner D. 8917
Peet N. P. Huber E. W. and **Farr R. A.** Diastereoselectivity in the intramolecular nitrone, oxime, and nitrile oxide cycloaddition reactions. Synthesis of amino inositol derivatives as α-glucosidase inhibitors 7537
Pehk T. see Martin I. 3999
Peiró M. see Abad A. 3829
Pellacani L. see Fioravanti S. 5877
Pelletier S. W. see Joshi B. S. 4299
Pelletier S. W. see Ross S. A. 9585
Pelloux N. see Defrancq E. 5725
Pelter A. Ward R. S. Venkateswarlu R. and **Kamakshi C.** Oxidative transformations of lignans—reactions of dihydrocubebin and a derivative with DDQ 1275
Penco S. see Cevasco G. 7353
Penn G. see Terpetschnig E. 3045
Penna M. see Cardillo G. 2263
Perales A. see de la Torre M. C. 3463
Pereira J. A. P. see Feliciano A. S. 6503
Perez-Carreño E. see Abarca B. 5277
Pérez-Pinar A. see Nájera C. 6337
Perrio S. see Beslin P. 6275
Perrone D. see Epifani E. 4465
Peter M. G. Crescenzi O. 6243
Peters E.-M. see Terpetschnig E. 3045
Peters K. see Terpetschnig E. 3045
Petrillo G. Novi M. Dell'Erba C. and **Tavani C.** $S_{RN}1$ C-Arylation of phenols by azosulfides: a novel synthesis of dibenzo[*b,d*]pyran-6-ones 9297
Petrillo G. see Dell'Erba C. 333
Petró J. see Mallát T. 441
Pettit G. R. Gao F. Sengupta D. Coll J. C. Herald C. L. Doubek D. L. Schmidt J. M. Van Camp J. R. Rudloe J. J. and **Nieman R. A.** Isolation and structure of bryostatins 14 and 15 3601
Pezzuto J. M. see Fullas F. 8515
Pfaar U. see Gygax D. 5119
Phanstiel IV, O. see Dolbier W. R. 2065
Phisalaphong C. see Takayama H. 1383
Piccialli V. see Migliuolo A. 7937
Piccolino E. see McCullough D. W. 9727
Piehler L. T. Montchamp J.-L. Frost J. W. and **Manly C. J.** Predicting inhibition of dehydroquinate synthase 2423
Pierini A. B. Santiago A. N. and **Rossi R. A.** Strain energy effect on the reactivity of bridgehead halides in electron transfer reactions 941
Pierre J.-L. see Moneta P. 1425
Piers E. Friesen R. W. and **Keay B. A.** Intramolecular palladium(0)-catalyzed coupling of enol triflate and vinylstannane functions. New annulation sequences leading to bicyclic diene systems 4555
Pietrusiewicz K. M. Salamonczyk I. Wieczorek W. Brandi A. Cicchi S. and **Goti A.** Direct synthesis of

isoxazolidinylphosphines by cycloaddition of nitrones to diphenylphosphinoethenes and X-ray structure of 7,7-dimethyl-1-oxo-1-phenyl-3-diphenylphosphinyl-hexahydro-1*H*-pyrrolo[1,2-*c*][1,3,2]oxazaphosphorine 9083
Pihlaja K. Parkkinen A. Fülöp F. Mattinen J. and **Bernáth G.** Ring–chain tautomerism and three- to four-component equilibria in fused-ring tetrahydro-1,3-oxazines 4031
Pihlaja K. see Parkkinen A. 2229
Pilling G. M. see Kumar V. 5099
Pindur U. see Haber M. 1925
Pinna L. see Rassu G. 8025
Pinnas J. L. see Gnabre J. N. 3545
Pinon J. see Borgschulte K. 8351
Piotto M. E. Granger J. N. Cho Y. Farschtschi N. and **Gorenstein D. G.** Synthesis, NMR and structure of oligonucleotide phosphorodithioates 2449
Piozzi F. see de la Torre M. C. 3463
Pitchen P. see France C. J. 6381
Pitt A. R. see Baldwin J. E. 8203
Pitt A. R. see Baldwin J. E. 8223
Pizzabiocca A. see Cecchi P. 4683
Placucci G. see Lunazzi L. 6427
Placucci G. see Lunazzi L. 9125
Platt K.-L. see Zetta L. 1911
Plavec J. Koole L. H. Sandström A. and **Chattopadhyaya J.** Structural studies of anti-HIV 3'-α-fluorothymidine and 3'-α-azidothymidine by 500 MHz ^{1}H-NMR spectroscopy and molecular mechanics (MM2) calculations 7363
Plé N. see Combret Y. 9369
Plessner T. see Craig D. 3095
Plummer J. S. see Cheng M.-C. 4861
Plusquellec D. see Baczko K. 3817
Plusquellec D. see Leon-Ruaud P. 5185
Pocar D. see Clerici F. 1937
Pocar D. see Clerici F. 8907
Pochini A. see Casnati A. 2221
Pochini A. see Groenen L. C. 8379
Podda G. see Landini D. 7477
Podlaha J. see Bernát J. 4665
Poh B.-L. Correlation analysis of stability constants of complexes formed between alkali metal cations and macrocycles 2903
Poirier D. Mérand Y. and **Labrie F.** Synthesis of 17β-estradiol derivatives with N-butyl, N-methyl alkylamide side chain at position 15 7751
Poje M. see Popovic T. 317
Poli G. see Bernardi A. 7357
Poli G. see Bernardi A. 7925
Polla M. and **Frejd T.** Synthesis of optically active cyclohexenol derivatives via enzyme catalyzed ester hydrolysis of 4-acetoxy-3-methyl-2-cyclohexenone 5883
Pons A. see Eritja R. 4113
Pooranchand D. see Pandey G. 1745
Pop E. see Brewster M. E. 7525
Popovic T. Sokolic L. Modric N. Palkovic A. and **Poje M.** Synthesis and structure of dehydro-4-iminoallantoin and its covalent adducts 317
Pornet J. see Guyot B. 3981
Porter J. R. see Lee T. V. 139
Potier P. see Ettouati L. 9823
Pougny J. R. see Avignon-Tropis M. 7279
Poulter C. D. see Street I. P. 5919
Poupaert J. H. see Aichaoui H. 6649
Poupat C. see Ettouati L. 9823
Pradera M. A. see Fuentes J. 5797
Pranata J. and **Jorgensen W. L.** Monte Carlo simulations yield absolute free energies of binding for guanine-cytosine and adenine-uracil base pairs in chloroform 2491
Prasad R. see Alvi K. A. 8943
Pratt A. J. see Baldwin J. E. 5603
Previtera L. see Greca M. D. 7129
Prevost C. see Bastard J. 229
Primieri S. see Cipiciani A. 83
Primo J. see Climent M. J. 9289
Prince B. see Agami C. 4343
Pritchard M. C. see Bourne G. T. 4763
Prota G. Crescenzi O. 6243
Prowse W. G. Arnot K. I. Recka J. A. Thomson R. H. and **Maxwell J. R.** The quincyte pigments: fossil quinones in an Eocene clay mineral 1095
Pu Y.-M. and **Lightner D. A.** On the conformation of bilirubin dianion 6163
Puchot C. see Agami C. 4343
Puebla P. see Feliciano A. S. 6503
Pugin B. see Buser H. P. 5709
Pulido-Fernandez R. see Fronza G. 9247
Pupek K. see Grochowski E. 6759
Purdy D. F. see Nair V. 365
Purdy D. F. see Nair V. 8949
Purohit P. C. see Sonawane H. R. 8259

Quader Md. A. Gray A. I. Waterman P. G. Lavaud C. Massiot G. and **Sadler I. H.** Phebaloparvilactone: a new protolimonoid from the leaves of *Phebalium squamulosum* ssp. *parvifolium* 3611
Quaranta E. see Aresta M. 9489
Quazi P. see Billington S. 5231
Quéguiner G. see Combret Y. 9369
Queguiner G. see Levacher V. 429
Quiclet-Sire B. see Barton D. H. R. 9383
Quintana R. M. see Barrero A. F. 4441
Quirante J. see Bonjoch J. 4417

Racherla U. S. see Zubaidha P. K. 5759
Rachwal S. see Katritzky A. R. 2683
Raczko J. see Gołebiowski A. 1053
Radunz H.-E. Eiermann V. Schneider G. and **Riethmüller A.** A convenient approach to hydroxyethylene dipeptide isosteres as building blocks for enzyme inhibitors 1887
Rafel S. see Branchadell V. 8775
Raghavachari R. see Krow G. R. 8499
Raimondi L. see Annunziata R. 3869
Rainey P. B. see Mortishire-Smith R. J. 3645
Rajappa S. see Kulkarni G. H. 1249
Rajappa S. see Maybhate S. P. 3887
Rajasekhar B. see Kasturi T. R. 5245
Rajviroongit S. see Grigg R. 8297
Rama Rao A. V. see Gurjar M. K. 7117
Ramage R. Blake A. J. Florence M. R. Gray T. Raphy G. and **Roach P. L.** A base labile protecting group for peptide synthesis: 2,2-bis(4'-nitrophenyl)ethan-1-oxycarbonyl urethanes 8001
Ramage R. Green J. and **Blake A. J.** An acid labile arginine derivative for peptide synthesis: N^G-2,2,5,7,8-pentamethylchroman-6-sulphonyl-L-arginine 6353
Ramage R. MacLeod A. M. and **Rose G. W.** Dioxalanones as synthetic intermediates—VI. Synthesis of 3-deoxy-D-manno-2-octulosonic acid (KDO), 3-deoxy-D-arabino-2-heptulosonic acid (DAH) and 2-keto-3-deoxy-D-gluconic acid (KDG) 5625
Ramaswamy S. and **Oehlschlager A. C.** Chemico-enzymatic syntheses of racemic and chiral

isomers of 7-methyl-1,6-dioxaspiro[4.5]decane 1157
Ramaswamy S. and **Oehlschlager A. C.** Chemico-microbial syntheses of Japanese beetle and mosquito oviposition pheromones 1145
Ramos Tombo G. M. see Didier E. 4941
Rao Ch. S. Balu M. P. Ila H. and **Junjappa H.** Cycloaromatisation of α-oxoketene dithioacetals and β-oxodithioacetals with benzyl-, 1-(naphthylmethyl) and 2-(naphthylmethyl)magnesium halides: synthesis of condensed polynuclear aromatic hydrocarbons 3499
Raphy G. see Ramage R. 8001
Rassu G. Spanu P. Casiraghi G. and **Pinna L.** Highly stereoselective total synthesis of octopyranose derivatives 8025
Raucher S. see Hopkins P. B. 2475
Ravey J.-C. see Selve C. 411
Rawdah T. N. NMR Spectroscopic study of the conformational features of cyclododecanone 8579
Raza Z. see Cudic P. 5295
Razack L. A. see Gullu M. 675
Rebek, Jr., J. see Park T. K. 2507
Rebolledo F. see Gotor V. 9207
Rebuffat S. see Borgschulte K. 8351
Reck G. see Theil F. 7569
Recka J. A. see Prowse W. G. 1095
Reddy G. M. see Marchand A. P. 6571
Reddy G. V. see Mereyala H. B. 6435
Reddy G. V. see Mereyala H. B. 9721
Reddy K. S. see Carter B. J. 2463
Reddy S. H. K. see Mehta G. 7821
Reetz M. T. see Frenking G. 8991
Reetz M. T. see Frenking G. 9005
Regier K. see Rieker A. 645
Rehder K. S. and **Reusch W.** Thermal reactions of a 2-aryl-1-vinylcyclobutanol 7551
Reibenspies J. H. see Sun Y. 357
Reinhoudt D. N. see Groenen L. C. 8379
Reisdorf D. see Fréchet D. 61
Renzi G. see Cecchi P. 4683
Reusch W. see Rehder K. S. 7551
Rey-Stolle M. F. see Moreno-Mañas M. 6511
Reynolds W. F. see Tinto W. F. 8679
Rezende M. C. see Julia M. 6939
Rezessy B. Toldy L. Horváth G. and **Sohár P.** Reaction of aminothiazole-oximetosylates with thiols 10045
Rich D. H. see Kuzmic P. 2519
Rico M. see Norte M. 7437
Riddell F. G. and **Tompsett S. J.** The complete assignment of the ^{1}H and ^{13}C nmr spectra of the alkali metal salts of salinomycin and narasin 10109
Rieker A. Beisswenger R. and **Regier K.** Syntheses via anodically produced phenoxenium ions. Applications in the field of peptides and carbohydrates 645
Riethmüller A. see Radunz H.-E. 1887
Righetti P. P. see Desimoni G. 5857
Righetti P. P. see Desimoni G. 8399
Riguera R. see Rodriguez J. 4753
Riguera R. see Rodriguez J. 7501
Rihs G. see Didier E. 4941
Rindone B. see Chioccara F. 4429
Ripstos S. see Frimer A. A. 8361
Ritter A. see Braun H. 3313
Rivas F. see García-Granados A. 91
Roach P. L. see Ramage R. 8001
Roberts T. G. see Clarke S. J. 5615
Robertson J. see Baldwin J. E. 5901
Robertson J. see Baldwin J. E. 6795
Robin J.-P. see Landais Y. 3787
Robina I. see Fuentes J. 5797
Robins D. J. see Equi A. M. 507
Robinson B. C. see Gunter M. J. 7853
Roden F. S. see Lee T. V. 139
Rodrigues J. A. R. see de Carvalho M. 2073
Rodríguez B. see la Torre M. C. 3463
Rodríguez B. see Malakov P. Y. 10129
Rodriguez H. Marquez A. Chuaqui C. A. and **Gomez B.** Oxidation of mesoionic oxazolones by oxygen 5681
Rodriguez J. Castro R. and **Riguera R.** Corrigendum 7501
Rodriguez J. Castro R. and **Riguera R.** Holothurinosides: new antitumour non sulphated triterpenoid glycosides from the sea cucumber *Holothuria forskalii* 4753
Rodríguez J. H. see Carmen Carreño M. 10035
Rodríguez M. L. see Norte M. 9411
Rodriguez R. see Arséniyadis S. 7045
Rodríguez-Hahn L. see del Carmen Fernández M. 7199
Rogers D. H. see Baker R. W. 7951
Rogers T. E. see Coleman J. P. 809
Rohmer M. see Stampf P. 7081
Rojas A. see Banerjee A. K. 2081
Rojas A. see Banerjee A. K. 5641
Rolando C. see Amatore C. 777
Romaniko S. V. see Gakh A. A. 7447
Romero J. R. see Navarro M. 851
Romeyke Y. Keller M. Kluge H. Grabley S. and **Hammann P.** Secondary metabolites by chemical screening—XIII. Enantioselective synthesis of δ-lactones from streptenol A, a chiral building block from *Streptomyces* 3335
Romo D. and **Meyers A. I.** Chiral non-racemic bicyclic lactams. Vehicles for the construction of natural and unnatural products containing quaternary carbon centers 9503
Ronchetti F. see Colombo D. 103
Ronzini L. see Epifani E. 7489
Ronzini L. see Florio S. 3365
Rood G. A. see Vega E. 4361
Rosati O. see Ceccherelli P. 4211
Rosati O. see Ceccherelli P. 7403
Rose G. W. see Ramage R. 5625
Rosen T. and **Guarino K. J.** Kinetically-controlled displacement by azide on an allylic chloride: synthesis of a highly potent serotonin-3 receptor ligand prototype 5391
Ross S. A. Joshi B. S. Desai H. K. Pelletier S. W. Newton M. G. Zhang X. and **Snyder J. K.** Delatisine, a novel diterpenoid alkaloid from *Delphinium elatum* L. 9585
Rossi E. Calabrese D. and **Farma F.** A convenient synthesis of quinazoline ring by tandem aza-Wittig reaction/electrocyclic ring closure 5819
Rossi R. Carpita A. Ciofalo M. and **Lippolis V.** Selective and efficient syntheses of phototoxic 2,2':5',2"-terthiophene derivatives bearing a functional substituent in the 3'- or the 5-position 8443
Rossi R. A. see Pierini A. B. 941
Rossi S. S. see Ciattini P. G. 6449
Rothfus S. L. see Moeller K. D. 583
Roubaud C. see Vanelle P. 5173
Rouessac F. see Alexandre C. 5481
Rouessac F. see Grandguillot J.-C. 5133
Rouillard M. see Geribaldi S. 993
Roumestant M.-L. see Tabcheh M. 4611
Rousseau B. see Dolle F. 7067
Roussel J.-P. see Dolle F. 7067

Rousselle D. Francotte E. Feneau-Dupont J. Tinant B. Declercq J. P. and **Viehe H. G.** Epoxy-epimination of cyclic conjugated dienes—VII. Cycloaddition of nitroso-halogenobenzenes to cyclopentadiene followed by rearrangement to epoxy-epimino- and γ,δ-epiminopentadienal derivatives via N–O and C–C bond breaking 8323
Roussi G. and **Zhang J.** The use of the β-amino-alcohol-N-oxide derivatives in the synthesis of 2,3 or 4-alkyl substituted NH pyrrolidines 5161
Routledge A. see Haaima G. 5203
Roy S. K. see Mahato S. B. 5215
Royer D. see Laronze J.-Y. 4915
Rozzi A. see Clerici F. 1937
Rubio González R. see Fernández Mateos A. 4375
Rubiralta M. Marco M. P. Bolós J. and **Trapé J.** Synthetic applications of 2-aryl-4-piperidones—VI. Synthesis of the fundamental tetracyclic skeleton of ervitsine and its 20-deethylidene-6,16-dihydro analogue 5585
Rubiralta M. see Castells J. 7911
Rudloe J. J. see Pettit G. R. 3601
Ruël B. H. M. see Groenen L. C. 8379
Ruff F. see Csámpai A. 4457
Ruffolo, Jr. R. R. Chirality in α- and β-adrenoceptor agonists and antagonists 9953
Ruiz-Perez C. and **Venkateswarlu S.** Isolation, structure and synthesis of new diarylbutane lignans from *Phyllanthus niruri*: synthesis of 5'-desmethoxy niranthin and an antitumor extractive 8917
Rullkötter J. see Peakman T. M. 3779
Rullkötter J. see Peakman T. M. 8941
Rupprecht J. K. see Saad J. M. 2751
Russo F. see Caputo R. 4187
Rüterjans H. see Franken H.-D. 7593
Ruzziconi R. Naruse Y. and **Schlosser M.** 1-Oxa-2,3-cyclohexadiene ('2*H*-isopyran'): a strained heterocyclic allene undergoing cycloaddition reactions with characteristic typo-, regio- and stereoselectivities 4603
Rycroft D. S. see Ngadjui B. T. 3555
Rys B. Duddeck H. and **Hiegemann M.** Conformational analysis of benzoanellated nine-membered rings—I. 1,4,5,7-Tetrahydro-3*H*-2,6-benzodithionin derivatives 1417

Saad J. M. Hui Y. Rupprecht J. K. Anderson J. E. Kozlowski J. F. Zhao G. Wood K. V. and **McLaughlin J. L.** Reticulatacin: a new bioactive acetogenin from *Annona reticulata* (Annonaceae) 2751
Sabnis G. S. see Singh S. B. 6931
Sadler I. H. see Quader Md. A. 3611
Sáenz de Buruaga A. see Amate Y. 5811
Safadi M. see Breuer E. 1257
Sahu N. P. see Mahato S. B. 5215
Saigo K. see Machida S. 3737
Sainsbury M. Mahon M. F. Williams C. S. Naylor A. and **Scopes D. I. C.** Chiral synthesis of 6,7-benzomorphans: synthesis of (–)1(*S*),2(*S*),4(*R*),6(*R*)-1,2,3,4,5,6-hexahydro-2,6-methano-8-methoxy-1,3,4,6-tetramethyl-3-benzazocine through the chromium hexacarbonyl mediated cyclisation of 1(*S*),1'(*R*)-1,2-dihydro-7-methoxy-1,4-dimethyl-1-(*N*-methyl-*N*-trifluoroacetamido-1'-methylethan-2'-yl)naphthalene 4195
Sainsbury M. see Brown D. W. 4383
Saito K. Yamazaki M. Kawaguchi A. and **Murakoshi I.** Metabolism of solanaceous alkaloids in transgenic plant teratomas integrated with genetically engineered genes 5955
Sakai K. see Taura Y. 4879
Sakai K. see Yamamoto T. 8523
Sakai S. see Takayama H. 1383
Sakaki J. see Sato M. 5689
Sakaki J. Sugita Y. Sato M. and **Kaneko C.** Synthesis of 1,3-dioxin-4-ones having chiral hydroxyalkyl groups at the 6-position by means of baker's yeast reduction and their uses for EPC synthesis 6197
Sakamoto T. Kondo Y. Uchiyama D. and **Yamanaka H.** Condensed heteroaromatic ring systems—XIX. Synthesis and reactions of 5-(tributylstannyl)isoxazoles 5111
Sakamoto T. Kondo Y. Yasuhara A. and **Yamanaka H.** Condensed heteroaromatic ring systems—XVII. Palladium-catalyzed cross-coupling reaction of aryl bromides with (Z)-1-ethoxy-2-tributylstannylethene and its utilization for construction of condensed heteroaromatics 1877
Sakata D. see Matsunaga S. 2999
Sakatsume O. Yamaguchi T. Ishikawa M. Hirao I. Miura K. and **Takaku H.** Solid phase synthesis of oligoribonucleotides by the phosphoramidite approach using 2'-*O*-1-(2-chloroethoxy)ethyl protection 8717
Sakoda H. see Sato M. 5689
Sakuma D. see Sugai T. 7237
Salamonczyk I. see Pietrusiewicz K. M. 9083
Salas M. see Bosch J. 5269
Salom C. see Moreno-Mañas M. 6511
Sam N. San-Miguel B. A. Taran M. and **Delmond B.** Synthèse et réarrangement de l'époxy-8,14β pimarate de méthyle en vue d'accéder au squelette diterpénique cassane 9187
Samadi M. see Barton D. H. R. 9383
Samarai L. I. see Matveyev Yu. I. 1563
Samoshin V. V. see Strelenko Y. A. 9455
Samson E. Frischmuth K. Berlage U. Heinz U. Hobert K. and **Welzel P.** Synthesis of (+)-strigol, (+)-4'-*epi*-strigol, and their enantiomers 1411
Samson E. see Frischmuth K. 9793
Samuelson A. G. see Baruah J. B. 9449
San-Miguel B. A. see Sam N. 9187
Sánchez A. A. see del Carmen Fernández M. 7199
Sánchez-Baeza F. see Messeguer A. 1291
Sanchez-Cano G. Montiel V. and **Aldaz A.** Synthesis of L-cysteic acid by indirect electrooxidation and an example of paired synthesis: L-cysteic acid and L-cysteine from L-cystine 877
Sánchez-Ferrando F. see Matia M. P. 7329
Sancho M.-R. see Baudouy R. 10015
Sandri S. see Cardillo G. 2263
Sands T. H. see Sanson D. R. 3633
Sandström A. see Glemarec C. 3417
Sandström A. see Hovinen J. 4693
Sandström A. see Plavec J. 7363
Sandström A. see Xi Z. 9675
Sankawa U. see Hakamatsuka T. 5969
Sansano J. M. see Nájera C. 5193
Sansano J. M. see Nájera C. 6337

Sanson D. R. Gracz H. Tempesta M. S. Fukuda D. S. Nakatsukasa W. M. Sands T. H. Baker P. J. and **Mynderse J. S.** A82775B and A82775C, novel metabolites of an unknown fungus of the order Sphaeropsidales 3633
Santafianos D. see Anderson J. C. 6813
Santelli M. see Viala J. 3347
Santhakumar V. see Grigg R. 9703
Santiago A. N. see Pierini A. B. 941
Sapre N. Y. see Dike S. Y. 4775
Sarandeses L. A. see Mascareñas J. L. 3485
Sarma J. see Barton D. H. R. 7091
Sarmah B. K. and **Barua N. C.** Al–$NiCl_2{\cdot}6H_2O$–THF: a new, mild and neutral system for selective reduction of organic functional groups 8587
Sasai H. see Mori M. 531
Sasaki A. see Ito Y. 2801
Sasaki A. see Kobayashi K. 5437
Sasaki A. see Kobayashi K. 7245
Sasaki K. see Ito S. 841
Sasaki O. see Tsunoda T. 3925
Sasaki T. see Kobayashi J. 6617
Sasaki T. see Shigemori H. 8529
Sasaki T. see Tsuda M. 2181
Sato M. Kitazawa N. Nagashima S. Kaneko C. Inoue N. and **Furuya T.** Chiral spirocyclic (Z)-5-arylmethylene-1,3-oxazine-4,6-diones, new chiral heterodienes 7271
Sato M. Sakaki J. Sugita Y. Yasuda S. Sakoda H. and **Kaneko C.** Two lactone formation reactions from 1,3-dioxin-4-ones having hydroxyalkyl group at the 6-position: difference in ring opening and closure 5689
Sato M. see Sakaki J. 6197
Sato S. see Mio S. 2111
Sato S. see Mio S. 2121
Sato T. Kikuchi T. Tsujita H. Kaetsu A. Sootome N. Nishida K. Tachibana K. and **Murayama E.** The reaction of trialkylstannylmethyllithium with α,β-epoxy ketones and α-chloro ketones 3281
Sato T. Wakahara Y. Otera J. and **Nozaki H.** Organotin triflate as practical catalyst for Michael addition of enol silyl ethers 9773
Satyanarayana P. see Fernandez-Forner 8931
Satyanarayana P. Venkateswarlu S. and **Viswanatham K. N.** Oxidative aryl–aryl, aryl–benzyl coupling of lignans—reactions of phyllanthin and haloderivatives with TTFA, DDQ, Li/THF)))): synthesis of dibenzocyclooctadiene system and phyltetralin 8277
Sauvage J.-P. see Chardon-Noblat S. 5123
Sauvêtre R. see Tellier F. 7767
Savage T. J. see Wagschal K. 5933
Savona G. see de la Torre M. C. 3463
Sawaki Y. see Kimura M. 867
Saxton J. E. see Ali A. 6407
Scahill T. A. see Ghosh A. 8653
Schaeffer J. M. see Singh S. B. 6931
Schäfer H. J. and **Schneider R.** Oxidation of partially protected carbohydrates at the nickel hydroxide electrode 715
Schambel P. see Viger A. 7309
Schepartz A. see Cuenoud B. 2535
Schick H. see Theil F. 7569
Schiesser C. H. see Beckwith A. L. J. 121
Schiesser C. H. see Davies A. G. 1707
Schleifer L. see Aped P. 5781
Schleifer L. see Müller R. 1013
Schloeder D. M. see Janda K. D. 2503
Schlosser M. see Bessard Y. 1231
Schlosser M. see Bessard Y. 7323
Schlosser M. see Bessiere Y. 4355
Schlosser M. see Ruzziconi R. 4603
Schlosser M. and **Bossert H.** The 'two-fold reaction' benchmark applied to the copper catalyzed assembling of 1,ω-difunctional hydrocarbon chains 6287
Schmidt B. and **Hoffmann H. M. R.** On the way to aflatoxins and related structure types. Regio-controlled annulations by application of homogenous palladium catalysis, urethane tether and *ortho,ortho'*-diiodine effect 9357
Schmidt J. M. see Pettit G. R. 3601
Schmidt R. R. see Vankar Y. D. 9985
Schmidt T. Olefins by transition metal catalyzed elimination reactions from tertiary alcohols and acetates 8155
Schmidtchen F. P. see Braun H. 3313
Schmidtchen F. P. see Braun H. 3329
Schnatter W. F. K. Almarsson Ö. and **Bruice T. C.** The synthesis of a porphyrin with a hydrocarbon encapsulated face 8687
Schneider A. see Braun H. 3313
Schneider A. see Braun H. 3329
Schneider G. see Radunz H.-E. 1887
Schneider R. see Schäfer H. J. 715
Schofield C. J. see Baldwin J. E. 4089
Schofield C. J. see Baldwin J. E. 5835
Schofield C. J. see Baldwin J. E. 9881
Schöllkopf U. see Groth U. 2835
Schomburg D. see Borgschulte K. 8351
Schreiber S. L. and **Verdine G. L.** Protein overproduction for organic chemists 2543
Schroeder J. see Park T. K. 2507
Schröter D. see Jäger V. 2195
Schröter D. see Jäger V. 4787
Schultz P. see Chmielewski J. 2563
Schummer A. Yu H. and **Simon H.** Polyfunctional (*R*)-2-hydroxycarboxylic acids by reduction of 2-oxo acids with hydrogen gas or formate and resting cells of *Proteus vulgaris* 9019
Schwartz R. E. see Hensens O. D. 3915
Schwerdt J. H. see Friary R. J. 9981
Scilimati A. see Di Nunno L. 4121
Scofield A. M. see de S. Pereira A. C. 5637
Scolastico C. see Bernardi A. 7925
Scopes D. I. C. see Sainsbury M. 4195
Scott A. I. see Hoshino T. 5925
Sebastiano R. see Chioccara F. 4429
Segarra V. M. see Valls N. 1065
Seijas J. A. see Fleet G. W. J. 525
Seki H. see Torisawa Y. 8067
Selve C. Ravey J.-C. Stebe M.-J. El Moudjahid C. Moumni E. M. and **Delpuech J.-J.** Monodisperse perfluoro-polyethoxylated amphiphilic compounds with two-chain polar head—preparation and properties 411
Sen S. see Mahato S. B. 5215
Senda S. see Fukusaki E. 6223
Senderowitz H. see Aped P. 5781
Sengupta D. see Pettit G. R. 3601
Sepac D. see Cudic P. 5295
Serra A. C. da Silva Corrêa C. M. M. and **do Vale M. L. C.** The effect of the carbonyl group in the cyclization of 1-hexenyl radicals 9463
Serratosa F. see Almansa C. 5867
Servi S. see Fronza G. 9247
Severin T. see Kettner B. 9351
Sgarra R. see Epifani E. 7489
Shaffer S. A. see Bonjouklian R. 7739

Shah K. see Vankar Y. D. 8883
Shah V. G. see Sonawane H. R. 8259
Sharma G. V. M. and **Vepachedu S. R.** Stereoselective synthesis of (–)-canadensolide from D-glucose 519
Sharma S. and **Oehlschlager A. C.** Evidence for intermediate π-complexes in the addition of trialkylsilyl and trialkylstannylcuprates to α,β-unsaturated enones 1177
Shastin A. V. see Gridnev I. D. 5577
Shaubi E. see Grinberg S. 2895
Shaw A. C. see Nelson L. A. K. 3259
Shawe T. T. and **Lanny S. Liebeskind** Saframycin synthetic studies 5643
Sheldrick W. S. see Frischmuth K. 9793
Shelly D. C. see Bose A. K. 5379
Shen T. Y. see Berlin W. K. 1
Sheppard R. N. see Anderson J. C. 6813
Sheppard R. N. see Ley S. V. 9231
Sherburn M. S. see Murphy J. A. 4077
Sheridan H. see Baldwin J. E. 8203
Sherman D. H. Bibb M. J. Simpson T. J. Johnson D. Malpartida F. Fernandez-Moreno M. Martinez E. Hutchinson C. R. and **Hopwood D. A.** Molecular genetic analysis reveals a putative bifunctional polyketide cyclase/dehydrase gene from *Streptomyces coelicolor* and *Streptomyces violaceoruber*, and a cyclase/O-methyltransferase from *Streptomyces glaucescens* 6029
Shertzer H. G. see Brown D. W. 4383
Shi G. Xu Y. and **Xu M.** Carbenoid entry into trifluoromethylated molecules: preparation of functionalized CF_3-containing γ,δ-unsaturated carboxylic esters by rhodium-catalyzed reaction of ethyl 3,3,3-trifluoro-2-diazo-propionate with allylic sulfides and their further facile conversion to trifluoromethylated conjugated dienoic esters 1629
Shiau F.-Y. see Pandey R. K. 9571
Shiba T. see Teshima T. 3305
Shibasaki M. see Mori M. 531
Shibuya H. see Kitagawa I. 2169
Shigemori H. see Yamamura S. 635
Shigemori H. Wakuri S. Yazawa K. Nakamura T. Sasaki T. and **Kobayashi J.** Fellutamides A and B, cytotoxic peptides from a marine fish-possessing fungus *Penicillium fellutanum* 8529
Shimada A. see Tokuyama T. 5401
Shimizu I. Hayashi K. Ide N. and **Oshima M.** Facile synthesis of (-)-sericornin by means of palladium-catalyzed hydrogenolysis of alkenyloxiranes 2991
Shing T. K. M. and **Tang Y.** (–)-Quinic acid in organic synthesis —II. Facile syntheses of pseudo-β-D-mannopyranose and pseudo-β-D-fructopyranose 4571
Shinkai S. see Iwamoto K. 4325
Shinkai S. see Iwamoto K. 7197
Shioiri T. see Hamada Y. 8635
Shiori T. see Mori S. 5051
Shiozaki M. Kobayashi Y. Hata T. and **Furukawa Y.** Synthesis of renin inhibitors possessing hydroxyethylene isostere residue from 3,4,6-tri-O-acetyl-D-glucal via lactone precursor 2785
Shiozaki M. Kobayashi Y. and **Arai M.** Synthesis of (2*R*,3*S*)-3-[(benzyloxycarbonyl)oxy]-2-fluorotetradecanoic acid 7021
Shiraishi M. see Mio S. 2121
Shizuri Y. see Yamamura S. 635
Shono T. Nozoe T. Maekawa H. Yamaguchi Y. Kanetaka S. Masuda H. Okada T. and **Kashimura S.** Anodic oxidation of cycloheptatriene systems and its application to the synthesis of non-benzenoid aromatic compounds 593
Shudo K. see Hashimoto Y. 1837
Shukla A. see Iqbal J. 8753
Shukla R. see Hutchings M. G. 7869
Shundo R. Nishiguchi I. Matsubara Y. and **Hirashima T.** Carbon–carbon bond formation using manganese(III) acetate as an electrochemical mediator 831
Shuttleworth S. J. see Allcock S. J. 10053
Siani A. C. see Moreno-Mañas M. 6511
Sica D. see Migliuolo A. 7937
Sicking W. see Bienfait B. 8167
Sidjimov A. see Bernardi A. 7357
Sidjimov A. see Bernardi A. 7925
Sigurdsson S. Th. see Hopkins P. B. 2475
Silva M. V. see Suau R. 5841
Simmonds M. S. J. see Ley S. V. 9231
Simmons D. L. see Marchand A. P. 907
Simon H. see Braun H. 3329
Simon H. see Schummer A. 9019
Simon H. see Yu H. 9035
Simonet J. see Chapuzet J.-M. 791
Simpkins N. S. see Chakraborty R. 7689
Simpkins N. S. Synthesis of homoallylic sulphides and selenides by Lewis acid mediated diplacement reactions of sulphones 323
Simpson T. J. see Sherman D. H. 6029
Sinaÿ P. see Marra A. 5149
Singh S. B. Smith J. L. Sabnis G. S. Dombrowski A. W. Schaeffer J. M. Goetz M. A. and **Bills G. F.** Structure and conformation of ophiobolin K and 6-epiophiobolin K from *Aspergillus ustus* as a nematocidal agent 6931
Singh S. P. see Keinan E. 4631
Singh S. P. see Vaknar Y. D. 8883
Sinha S. C. see Keinan E. 4631
Sinou D. see Sutowardoyo K. I. 1435
Skelton B. W. see Baker R. W. 7965
Šket B. Zupan M. Zupancic N. and **Pahor B.** Photosubstitution reactions on aromatic and heteroaromatic ring evidence for addition and substitution mechanism 5029
Šket B. see Zupancic N. 9071
Skrinjar M. see Wistrand L.-G. 573
Slawin A. M. Z. see Craig D. 3095
Slawin A. M. Z. see Ley S. V. 9231
Smalley R. K. see Lamara K. 2277
Smith J. see VanMiddlesworth F. 7563
Smith J. L. see Singh S. B. 6931
Smith K. M. see Pandey R. K. 9571
Smith K. M. see Swanson K. L. 685
Smith K. M. see Vicente M. G. H. 6887
Smith P. J. and **Wilcox C. S.** The chemistry of functional group arrays. Electrostatic catalysis and the 'intramolecular salt effect' 2617
Smith R. J. Mahiou B. and **Deinzer M. L.** Hydrolysis products of humulene diepoxide A 933
Smith S. C. see Ley S. V. 9231
Smith, III, A. B. see Chen B.-C. 173
Smitka T. A. see Bonjouklian R. 7739
Snatzke G. see Tóth G. 8119
Snider B. B. and **Merritt J. E.** Formation of seven- and eight-membered rings by Mn(III)-

based oxidative free-radical cyclization 8663
Snow K. M. see Swanson K. L. 685
Snozzi C. see Fréchet D. 61
Snyder J. K. see Joshi B. S. 4299
Snyder J. K. see Ross S. A. 9585
Snyder J. P. see Gupta A. K. 3665
Sobieray D. M. see Taylor E. C. 9599
Sobrio F. see Dolle F. 7067
Soejarto D. D. see Fullas F. 8515
Sohár P. see Rezessy B. 10045
Sohár P. see Fülöp F. 7673
Sokolic L. see Popovic T. 317
Solans X. see Fernandez-Fomer D. 8917
Solé D. see Bonjoch J. 4417
Solladié-Cavallo A. Khiar N. Fischer J. and **DeCian A.** Configuration and conformation of (–)-8-phenylmenthyl 3-amino-2-hydroxy-5-methylhexanoate 249
Solodenko V. A. Kasheva T. N. Kukhar V. P. Kozlova E. V. Mironenko D. A. and **Švedas V. K.** Preparation of optically active 1-aminoalkylphosphonic acids by stereoselective enzymatic hydrolysis of racemic *N*-acylated 1-aminoalkylphosphonic acids 3989
Somogyi L. Reactions of flavonoid thiosemicarbazones under acetylating conditions 9305
Sonawane H. R. Naik V. G. Bellur N. S. Shah V. G. Purohit P. C. Kumar M. U. Kulkarni D. G. and **Ahuja J. R.** Photoinduced vinylcyclopropane–cyclopentene rearrangement: a methodology for chiral bicyclo[3.2.0]heptenes. Formal syntheses of (±)-grandisol and naturally occurring (–)-$\Delta^{9(12)}$-capnellene and its antipode 8259
Sondengam B. L. see Ngadjui B. T. 3555
Sonoda S. see Asaoka M. 6967
Sood A. Sood C. K. Hall I. H. and **Spielvogel B. F.** Boron analogues of phosphonoacetates: synthesis, characterization and antitumor properties of sodium diethylphosphite-carboxyborane and related compounds 6915
Sood C. K. see Sood A. 6915
Sootome N. see Sato T. 3281
Sóti F. Kajtár-Peredy M. Keresztury G. Incze M. Kardos-Balogh Z. and **Szántay C.** Synthesis of vinca alkaloids and related compounds—LV. Synthesis of (±)-desmethoxy cuanzine 271
Sotiriou-Leventis C. see Abdel-Baky S. 5667
Soufiaoui M. see Lafquih Titouani S. 1665
Spande T. F. see Tokuyama T. 5401
Spande T. F. see Tokuyama T. 5415
Spanneut D. see Barbry D. 47
Spanu P. see Rassu G. 8025
Spassov S. see Georgieva A. 3375
Speckamp W. N. see Esch P. M. 4039
Speckamp W. N. see Esch P. M. 4063
Speckamp W. N. see Mooiweer H. H. 3451
Spencer J. B. see Jordan P. M. 6015
Speranza M. see Cecchi P. 4683
Spero D. M. see Adams J. 1765
Spielvogel B. F. see Sood A. 6915
Spies P. see Gygax D. 5119
Spindler F. see Buser H. P. 5709
Spogliarich R. Farnetti E. and **Graziani M.** Effect of charge distribution on selective hydrogenation of conjugated enones catalyzed by iridium complexes 1965
Spraul M. H. Nitz S. and **Drawert F.** Photochemical reactions of *p*-mentha-1,3,8-triene and structural related *p*-menthadienes 3037
Spunta G. see Andreoli P. 9061
Sridharan V. see Grigg R. 8297
Sridharan V. see Grigg R. 9703
Srikrishna A. and **Sundarababu G.** Radical cyclization strategies to terpenoids: syntheses of (±)-β-cuparenone, (±)-laurene and epilaurenes 481
Srivastava R. R. see Iqbal J. 3155
Stampf P. Herrmann D. Bisseret P. and **Rohmer M.** 2α-Methylhopanoids: first recognition in the bacterium *Methylobacterium organophilum* and obtention via sulphur induced isomerization of 2β-methylhopanoids. An account for their presence in sediments 7081
Stang P. J. Arif A. M. and **Zhdankin V. V.** Reaction of *E*-1,2-bis[triphenyl-(trifluoromethane sulfonyloxy)-phospho]ethylene, $Ph_3PCH{=}CHPPh_3{\cdot}2OTf$ with bases: unusual products and evidence for C_2-diylide, $Ph_3P{=}C{=}C{=}PPh_3$ formation 4539
Stanoeva E. see Georgieva A. 3375
Stanovnik B. 1,3-Dipolar cycloadditions of diazoalkanes to some nitrogen containing heteroaromatic systems 2925
Stebe M.-J. see Selve C. 411
Steckhan E. see Papadopoulos A. 563
Steenkamp J. A. Mouton C. H. L. and **Ferreira D.** Regio- and stereoselective oxidation of flavan-3-ol-, 4-arylflavan-3-ol-, and biflavanoid derivatives with 2,3-dichloro-5,6-dicyano-1,4-benzoquinone(DDQ) 6705
Steer L. M. see Bull J. R. 7377
Steffan B. Lepadin A, a decahydroquinoline alkaloid from the tunicate *Clavelina lepadiformis* 8729
Stern K. see Bergdahl M. 9691
Stevens C. see De Kimpe N. 3407
Stevens C. see De Kimpe N. 4723
Stevens M. F. G. see Yates P. C. 6493
Stevenson P. see Grigg R. 9703
Stewart J. Wilson D. B. and **Ganem B.** Chorismate mutase/prephenate dehydratase from *Escherichia coli*: subcloning, overproduction and purification 2573
Stewart J. B. see Bonjouklian R. 7739
Sticher O. see Konig G. M. 1399
Sticher O. see Wright A. D. 5717
Stokes T. M. see Morgan B. 1611
Stolle W. A. W. Marcelis A. T. M. and **van der Plas H. C.** A computational study towards the reactivity of 2-(2-ethynylphenyl-X-)pyrimidines in intramolecular Diels–Alder reactions 1753
Stones P. A. see Hodgson D. M. 4133
Stonkuss V. see Lusis V. 7429
Stork G. A. see Gijsen H. J. M. 4409
Stout T. J. Clardy J. Pathirana I. C. and **Fenical W.** Aplasmomycin C: structural studies of a marine antibiotic 3511
Strazzolini P. see Verardo G. 7845
Street I. P. Coffman H. R. and **Poulter C. D.** Isopentenyl diphosphate isomerase. Site-directed mutagenesis of Cys139 using 'counter' PCR amplification of an expression plasmid 5919
Strelenko Y. A. Samoshin V. V. Troyansky E. I. Demchuk D. V. Nikishin G. I. and **Zefirov N. S.** Conformational analysis of 2-alkyl-1,4-dithianes and related compounds by NMR spectroscopy and MMX 9455
Strohl W. R. see Floss H. G. 6045
Struchkov Yu. T. see Nifantyev E. E. 9839
Strydom S. J. see Martins F. J. C. 8373

Suau R. Silva M. V. and **Valpuesta M.** A novel oxidation stage in the chemistry of protoberberine alkaloids. Synthesis of 7,8-dehydroberbines 5841
Suda M. see Kobayashi J. 6617
Suemune H. see Yamamoto T. 8523
Suga A. Sugiyama T. Otsuka M. Ohno M. Sugiura Y. and **Maeda K.** Oxidation of alkenes by a chiral non-porphyrinic oxidizing catalyst based on the bleomycin–Fe(II) complex 1191
Sugai S. see Mio S. 2111
Sugai S. see Mio S. 2121
Sugai S. see Mio S. 2133
Sugai S. see Mio S. 2145
Sugai T. Sakuma D. Kobayashi N. and **Ohta H.** A synthesis of (–)-sitophilate by utilizing yeast-mediated reduction of an enol ester 7237
Sugai T. Yokochi T. Watanabe N. and **Ohta H.** A synthetic study of (–)-dihydroedulan II and related compounds 7227
Šuškovic B. Vajtner Z. and **Naumski R.** Synthesis and biological activities of some peptidoglycan monomer derivatives 8407
Suginome H. see Kobayashi K. 5437
Suginome H. see Kobayashi K. 7245
Suginome H. see Tokuda M. 747
Sugita Y. see Sakaki J. 6197
Sugita Y. see Sato M. 5689
Sugiura Y. see Suga A. 1191
Sugiyama T. see Suga A. 1191
Sulmon P. see De Kimpe N. 3389
Sulmon P. see De Kimpe N. 4723
Sun C.-Q. see Kuzmic P. 2519
Sun H. H. Cross S. S. Gunasekera M. and **Koehn F. E.** Weinbersterol disulfates A and B, antiviral steroid sulfates from the sponge *Petrosia weinbergi* 1185
Sun Y. Martell A. E. Reibenspies J. H. and **Welch M. J.** Syntheses of multidentate ligands containing hydroxypyridyl donor groups 357
Sun Y. Martell A. E. and **Welch M. J.** Synthesis of new multidentate ligands for the coordination of indium(III), gadolinium(III) and thorium(IV) 8863
Sunagawa M. see Ito Y. 2801
Sund C. Agback P. and **Chattopadhyaya J.** Synthesis of tetrameric cyclic branched-RNA (lariat) modelling the introns of group II and nuclear pre-mRNA processing reaction (Splicing) 9659
Sund C. Földesi A. Yamakage S. Agback P. and **Chattopadhyaya J.** New regiospecific synthesis of branched tetra-,nona- and deca-RNA modelling the lariat formed in RNA splicing reactions 6305
Sund C. see Hovinen J. 4693
Sundarababu G. see Srikrishna A. 481
Sundberg R. J. and **Gadamasetti K. G.** An improved reaction sequence for electrophilic cyclization of methyl 6-(2-indolyl)-2-azabicyclooct-7-ene-6-carboxylates to iboga alkaloid analogs 5673
Sunjic V. see Cudic P. 5295
Surendrakumar S. see Armstrong P. 4495
Surendrakumar S. see Grigg R. 4007
Surendrakumar S. see Grigg R. 4477
Surendrakumar S. see Grigg R. 8297
Sustmann R. see Bienfait B. 8167
Sutherland J. D. see Baldwin J. E. 5991
Sutowardoyo K. I. Emziane M. Lhoste P. and **Sinou D.** Highly regio and chemoselective ring opening of epoxides with trimethyl azide in the presence of aluminium isopropoxide and titanium isopropoxide 1435
Sutter M. see Buser H. P. 5709
Suzuki H. see Uno H. 6231
Suzuki M. see Mori Y. 4889
Švedas V. K. see Solodenko V. A. 3989
Svensson G. see Inghardt 6469
Sviridov A. F. Borodkin V. S. Ermolenko M. S. Yashunsky D. V. and **Kochetkov N. K.** Stereocontrolled synthesis of erythronolides A and B in a (C5–C9) + (C3–C4) + (C1–C2) + (C11–C13) sequence from 1,6-anhydro-β-D-glucopyranose (levoglucosan)–I. Synthesis of C1–C10 and C11–C13 segments 2291
Sviridov A. F. Borodkin V. S. Ermolenko M. S. Yashunsky D. V. and **Kochetkov N. K.** Stereocontrolled synthesis of erythronolides A and B in a (C5–C9)+ (C3–C4)+(C1–C2)+(C11–C13) sequence from 1,6-anhydro-β-D-glucopyranose (levoglucosan)—II 2317
Swanson K. L. Snow K. M. Jeyakumar D. and **Smith K. M.** Tetrapyrrole products from electrochemical cyclization of 1',8'-disubstituted-*a,c*-biladiene salts 685
Swenton J. S. see Morrow G. W. 655
Szabó Á. see Fülöp F. 7673
Szántay C. see Sóti F. 271
Szántay C. see Szántay, Jr. C. 1265
Szántay, Jr. C. Balázs M. Bölcskei H. and **Szántay C.** Synthesis of vinca alkaloids and related compounds—LVI. 15',20'-Anhydrovinblastine borane complex. Structural investigations using NMR methods 1265
Szczepanski S. W. see Krow G. R. 8499
Szmuszkovicz J. see D'Andrea S. V. 6157
Szmuszkovicz J. see Ghosh A. 8653
Sztaricskai F. J. see Herczegh P. 1541
Sztaricskai F. J. see Kovács I. 7837
Taapken T. see Groth U. 7583
Tabcheh M. El Achqar A. Pappalardo L. Roumestant M.-L. and **Viallefont P.** Alkylation and protonation of chiral Schiff bases: diastereoselectivity as a function of the nature of reactants 4611
Tabti B. see Alexandre C. 5481
Tacconi G. see Desimoni G. 8399
Tachibana K. see Sato T. 3281
Tadano K. Miyake A. and **Ogawa S.** Pd(II)-Mediated intramolecular acetal formation applied to a substrate prepared from D-glucose: a formal synthesis of enantiomeric paniculide B 7259
Taga T. see Kawai M. 2103
Tagliani A. see Aquino M. 7887
Tagliani A. see Fronza G. 9247
Takagi M. and **Yamamoto K.** Carbamate-directed stereoselective hydrogenation and kinetic resolution of *N*-protected α-(α-aminoalkyl)acrylates 8869
Takahashi A. Naganawa H. Ikeda D. and **Okami Y.** Structure determination of altemicidin by NMR spectroscopic analysis 3621
Takahashi H. Isobe M. and **Goto T.** Chemical synthesis of lampteroflavin as light emitter in the luminous mushroom, *Lampteromyces japonicus* 6215
Takahashi H. see Itoh T. 4317
Takahata H. Banba Y. and **Momose T.** An asymmetric total synthesis of (–)-supinidine 7635
Takakis I. M. Hadjimihalakis P. M. and **Tsantali G. G.** Influence

of the heterocyclic side ring during the Boulton-Katritzky rearrangement of 1,2-alkylenedioxy-nitrobenzofuroxans 7157
Takaku H. see Sakatsume O. 8717
Takamoto M. see Tsubotani S. 8079
Takayama H. Phisalaphong C. Kitajima M. Aimi N. and **Sakai S.** An efficient synthetic pathway to the macroline-type indole alkaloids talcarpine and alstonerine from ajmaline 1383
Takei H. see Asaoka M. 6967
Takei M. see Kakuno T. 7219
Takeuchi K. see Komatsu K. 6951
Takeuchi O. see Tsunoda T. 3925
Takeya K. see Itokawa H. 7007
Takeya K. see Morita H. 2757
Takikawa H. see Mori K. 2163
Talhouk J. see Cheng M. C. 4861
Tamminen T. see Lounasmaa M. 2879
Tamoto K. see Ito Y. 2801
Tanaka M. see Taura Y. 4879
Tanaka T. Bannai K. Hazato A. Koga M. Kurozumi S. and **Kato Y.** Short synthesis of isocarbacyclin by regioselective S_N2' alkylation of bicyclic allylic esters with zinc–copper reagents 1861
Tandel S. K. see Kulkarni G. H. 1249
Tang Y. see Shing T. K. M. 4571
Tanida S. see Tsubotani S. 3565
Taniguchi N. see Ihara M. 6635
Tarakeshwar P. Iqbal J. and **Manogaran S.** Stereoselective synthesis of substituted tetrahydrofurans—identification and analysis by proton NMR and MNDO, MM2 calculations 297
Taran M. see Sam N. 9187
Tardella P. A. see Fioravanti S. 5877
Tardivel R. see Laurent E. 3969
Tartakovsky E. see Aped P. 5781
Taura Y. Tanaka M. Wu X.-M. Funakoshi K. and **Sakai K.** Asymmetric cyclization reactions. Cyclization of substituted 4-pentenals into cyclopentanone derivatives by rhodium(I) with chiral ligands 4879
Tavani C. see Dell'Erba C. 333
Tavani C. see Petrillo G. 9297
Taylor E. C. and **Sobieray D. M.** 'Bicyclobenzodiazepinones' from 3-oxo-1,2-diazetidinium hydroxide, inner salts 9599
Taylor J.-S. and **Nadji S.** Unraveling the origin of the major mutation induced by ultraviolet light, the X→T transition at dTpdC sites. A DNA synthesis building block for the *cis-syn* cyclobutane dimer of dTpdU 2579
Taylor R. T. see Allison S. 9737
Taylor R. W. see Marchand A. P. 907
Teasdale A. see Grigg R. 9703
Tellier F. Descoins C. and **Sauvêtre R.** Stereospecific synthesis of 1,5-dien-3-ynes and 1,3,5-trienes. Application to the stereochemical identification of trienic sex pheromones 7767
Tempesta M. S. see Sanson D. R. 3633
ten Haven H. L. see Peakman T. M. 3779
ten Haven H. L. see Peakman T. M. 8941
Terashima S. see Ito Y. 2801
Terashima S. see Ito Y. 2821
Terpetschnig E. Penn G. Kollenz G. Peters K. Peters E.-M. and **von Schnering H. G.** Reactions of cyclic oxalyl compounds—XXXII. Photochemical and thermal 2+2-cycloadditions of diphenylketene and diphenylketen-N-(4-methyl-phenyl)-imine to five-membered heterocyclic 2,3-diones 3045
Terreni M. see Fronza G. 9247
Terris N. see Branchadell V. 8775
Teshima T. Matsumoto T. Wakamiya T. Shiba T. Aramaki Y. Nakajima T. and **Kawai N.** Total synthesis of NSTX-3, spider toxin of *Nephila maculata* 3305
Tetzlaff C. see Vilsmaier E. 8133
Tewari J. P. see Browne L. M. 3909
Thal C. see Alazard J.-P. 9195
Thea S. see Cevasco G. 7353
Theil F. Schick H. Winter G. and **Reck G.** Lipase-catalyzed transesterification of *meso*-cyclopentane diols 7569
Theodorakis E. A. see Barton D. H. R. 9167
Thiébault A. see Amatore C. 777
Thijs L. see Legters J. 5287
Thomas A. see Bhat L. 305
Thomas N. R. and **Gani D.** Synthesis of (2*R*)- and (2*S*)-[1-^{13}C]-2-amino-2-methylmalonic acid: chiral substrates for serine hydroxymethyltransferase 497
Thompson A. see Arséniyadis S. 7045
Thompson C. M. and **Green D. L. C.** Recent advances in dianion chemistry 4223
Thompson M. see Brown D. S. 1329
Thompson M. J. and **Zeegers P. J.** Two-phase nitration of phenols—III. The nitration of anisole 8787
Thompson T. R. see Joullié M. M. 8791
Thomson R. H. see Prowse W. G. 1095
Thornton-Pett M. see Ali A. 6407
Thornton-Pett M. see Grigg R. 4007
Thornton-Pett M. see Grigg R. 9703
Thummel R. P. The synthesis and properties of organized polyaza cavity-shaped molecules 6851
Thus L. see Legter J. 5287
Tiekink E. R. T. see Gunter M. J. 7853
Tiller T. see Groth U. 2835
Timmermann B. N. see Chen Y. 4869
Tinant B. see Rousselle D. 8323
Tinto W. F. John L. Reynolds W. F. and **McLean S.** Novel pseudopteranoids of *Pseudopterogorgia acerosa* 8679
Tip L. see Klusener P. A. A. 2041
Togo H. see Barton D. H. R. 7091
Tokuda M. Miyamoto T. Fujita H. and **Suginome H.** Stereoselective synthesis of 4- or 5-substituted 2-benzyl- and 2-benzoylpyrrolidines by means of anodic oxidation of δ-alkenylamines 747
Tokunaga Y. see Ihara M. 6635
Tokuyama T. Tsujita T. Garraffo H. M. Spande T. F. and **Daly J. W.** Alkaloids from dendrobatid poison frogs: further pumiliotoxins and allopumiliotoxins and a reassignment of the keto function in pumiliotoxin 307F 5415
Tokuyama T. Tsujita T. Shimada A. Garraffo H. M. Spande T. F. and **Daly J. W.** Alkaloids from dendrobatid poison frogs: further *cis*-decahydroquinolines and 8-methylindolizidines 5401
Toldy L. see Rezessy B. 10045
Toma L. see Burdisso M. 6725
Toma L. see Colombo D. 103
Toma L. see d'Alessandro N. 5043
Toma L. see De Bernardi M. 7109
Tomasini C. see Cardillo G. 2263
Tomioka N. see Itokawa H. 7007
Tomioka N. see Morita H. 2757
Tompsett S. J. see Riddell F. G. 10109
Tonachini G. see Canepa C. 8739
Tong W. Xi Z. Gioeli C. and **Chattopadhyaya J.** Synthesis of new 2',3'-modified uridine derivatives from 2',3'-ene-2'-phenylselenonyl uridine by Michael addition reactions 3431

Tonnard F. see Abbari M. 71
Toomey, Jr., J. E. and **Chaney G. A.** Anodic oxidation of 2-picoline 697
Toppet S. M. see Loosen P. K. 9269
Toppet S. M. see Meerpoel L. 10065
Torché J.-J. see Combret Y. 9369
Torii S. Okumoto H. and **Xu L. H.** A convenient approach to 1,4-dihydro-4-oxo-3-quinoline carboxylates by electro-oxidative formation of enamine moiety 665
Torisawa Y. Hashimoto A. Nakagawa M. Seki H. Hara R. and **Hino T.** A total synthesis of manzamine C and its geometrical isomer 8067
Tortajada A. see Aurell M. J. 1997
Toscano R. A. see del Carmen Fernández M. 7199
Tóth G. Lévai A. Dinya Z. and **Snatzke G.** Thermal decomposition of some new spiro-1-pyrazolines 8119
Toupet L. see Lafquih Titouani S. 1665
Townsend C. A. and **Basak A.** Experiments and speculations on the role of oxidative cyclization chemistry in natural product biosynthesis 2591
Trapé J. see Rubiralta M. 5585
Treilhou M. see Avignon-Tropis M. 7279
Troin Y. see Castells J. 7911
Troin Y. see Gramain J.-C. 7287
Troin Y. see Gramain J.-C. 7301
Troisi L. see Epifani E. 7489
Trowitzsch-Kienast W. see Borgschulte K. 8351
Troyansky E. I. see Strelenko Y. A. 9455
Trudell M. L. see Ley S. V. 8285
Trull F. R. and **Lightner D. A.** Synthesis of dipyrrinone esters using carbodiimide reagents 1945
Tsang R. see Yu K. L. 189
Tsankova E. T. see Enev V. St. 6399
Tsantali G. G. see Takakis I. M. 7157
Tsubotani S. Funabashi Y. Takamoto M. Hakoda S. and **Harada S.** A novel amino acid antibiotic TAN-950 8079
Tsubotani S. Tanida S. and **Harada S.** Structure determination of indolocarbazole alkaloids by NMR spectroscopy 3565
Tsuda M. Ishibashi M. Agemi K. Sasaki T. and **Kobayashi J.** Stelliferins A–F, new antineoplastic isomalabaricane triterpenes from the Okinawan marine sponge *Jaspis stellifera* 2181
Tsujita H. see Sato T. 3281
Tsujita T. see Tokuyama T. 5401
Tsujita T. see Tokuyama T. 5415
Tsunoda T. Sasaki O. Takeuchi O. and **Itô S.** An efficient method for hydrolysis of *N*-monosubstituted amides. Utilization of intramolecular N–O acyl migration in hydroxypivalimides 3925
Tsyganov D. V. see Yakubov A. P. 5237
Tuinman R. J. see Dreef C. E. 4709
Turchetta S. see Gambacorta A. 9097
Turner N. J. see Baldwin J. E. 457
Turner N. J. see Baldwin J. E. 8203
Turner N. J. see Baldwin J. E. 8223
Turner N. J. see Baldwin J. E. 9881
Tutonda M. G. see Loosen P. K. 9259
Uchiyama D. see Sakamoto T. 5111
Ueda M. see Mio S. 2145
Ugrak B. I. see Gakh A. A. 7447
Ugrak B. I. see Lukin K. A. 5769
Ugrak B. I. see Yakubov A. P. 5237
Ullenius C. see Christenson B. 4739
Umemura T. see Danda H. 8701
Uneyama K. Electrochemical trifluoromethylation of olefins; product-selectivity and mechanistic aspects 555
Ungaro R. see Casnati A. 2221
Ungaro R. see Groenen L. C. 8379
Uno H. Okada S. and **Suzuki H.** Preparation of perfluoroalkyl azaarenes with a perfluoroalkyllithium-boron trifluoride system 6231
Urbanczyk-Lipkowska Z. see Bose A. K. 5379
Urbanczyk-Lipkowska Z. see Panfil I. 10087
Urbano A. see Carreño M. C. 605
Utley J. H. P. see Gullu M. 675
Vacca J. P. deSolms S. J. Huff J. R. Billington D. C. Baker R. Kulagowski and **Mawer I. M.** Corrigenda 907
Vajtner Z. see Šuškovic B. 8407
Valentekovich R. see Benson D. R. 2401
Valle G. see Epifani E. 4465
Vallée-Goyet D. see Gramain J.-C. 7287
Vallée-Goyet D. see Gramain J.-C. 7301
Vallribera A. see Moreno-Mañas M. 6511
Valls N. Segarra V. M. Mallo L. C. and **Bosch J.** Synthesis of 15-azayohimban, a new heterocyclic ring system 1065
Valpuesta M. see Suau R. 5841
van Boom J. H. see Dreef C. E. 4709
Van Boom J. H. see Veeneman G. H. 1547
Van Camp J. R. see Pettit G. R. 3601
van den Bos J. C. Vloon W. J. Koomen G.-J. and **Pandit U. K.** Synthesis of acyclic analogues of sesbanimides A and B. 6787
Van Den Elst H. see Veeneman G. H. 1547
Van der Eycken J. see Van Speybroeck R. 4675
van der Marel G. A. see Dreef C. E. 4709
Van der Marel G. A. see Veeneman G. H. 1547
van der Plas H. C. see Stolle W. A. W. 1753
van der Steen F. H. and **van Koten G.** Syntheses of 3-amino-2-azetidinones: a literature survey 7503
van Koten G. see van der Steen F. H. 7503
van Leusen D. Flentge E. and **van Leusen A. M.** An efficient synthesis of 3-nitropyrroles 4639
van Leusen D. see van Leusen D. 4639
Van Speybroeck R. Guo H. Van der Eycken J. and **Vandewalle M.** Enantioselective total synthesis of (–)-epipodophyllotoxin and (–)-podophyllotoxin 4675
van Wiltenburg J. see Huizenga R. H. 4165
Vance B. see Mueller-Westerhoff U. T. 909
Vandewalle M. see Van Speybroeck R. 4675
Vanelle P. Madadi N. Roubaud C. Maldonado J. and **Crozet M. P.** Synthèse par réaction $S_{RN}1$ de nouveaux dérivés en série imidazo[1,2-*a*]pyridine à potentialités pharmacologiques 5173
Vankar P. S. see Vankar Y. D. 9985
Vankar Y. D. Bawa A. and **Kumaravel G.** Reaction of 2-nitro and 3-nitro-2-cyclohexenone acetals: preparation of useful intermediates 2027
Vankar Y. D. Shah K. Bawa A. and **Singh S. P.** Chemistry of α-nitroepoxides: synthesis of useful intermediates via nucleophilic

ring opening of α-nitroepoxides 8883
Vankar Y. D. Vankar P. S. Behrendt M. and **Schmidt R. R.** Synthesis of β-O-glycosides using enol ether and imidate derived leaving groups. Emphasis on the use of nitriles as a solvent 9985
VanMiddlesworth F. Dufresne C. Smith J. and **Wilson K. E.** Structure elucidation of L-687,781, a new β-1,3-D-glucan synthesis inhibitor 7563
VanMiddlesworth F. L. see Hensens O. D. 3915
Vaquero J. J. see Matia M. P. 7329
Vardaro R. R. Di Marzo V. Crispino A. and **Cimino G.** Cyercenes, novel polypropionate pyrones from the autotomizing Mediterranean mollusc *Cyerce cristallina* 5569
Vasyanina L. K. see Nifantyev E. E. 9839
Vaultier M. see Benalil A. 8177
Vaultier M. see Lafquih Titouani S. 1665
Vázquez-Tato M. P. see Fleet G. W. J. 525
Veeneman G. H. van der Marel G. A. Van Den Elst H. and **van Boom J. H.** An efficient approach to the synthesis of thymidine derivatives containing phosphate-isosteric methylene acetal linkages 1547
Vega E. Rood G. A. de Waard E. R. and **Pandit U. K.** Reduction of 5-uracilylmethylenepyridinium salts by thiols. A model of the reduction step of the thymidylate synthase reaction 4361
Venkateswarlu R. see Pelter A. 1275
Venkateswarlu S. see Satyanarayana P. 8277
Venkateswarlu S. see Satyanarayana P. 8931
Venter D. P. The acid-catalysed racemisation mechanism of catecholamines 5019
Ventura M. see Branchadell V. 8775
Venturello P. see Canepa C. 1485
Venturello P. see Canepa C. 8739
Vepachedu S. R. see Sharma G. V. M. 519
Verardo G. Giumanini A. G. and **Strazzolini P.** N-Dealkylation-N-nitrosation of tertiary aromatic amines by *n*-butyl nitrite 7845
Verboom W. see Groenen L. C. 8379
Verdine G. L. see MacMillan A. M. 2603
Verdine G. L. see Schreiber S. L. 2543
Verducci J. see Cavelier-Frontin F. 9807
Verpeaux J.-N. see Amatore C. 777
Vesey D. R. see Bit R. A. 4645
Viala J. Munier P. and **Santelli M.** C3-Homologation. Synthesis of C19-skipped polyenic pheromones 3347
Viallefont P. see Chaari M. 4619
Viallefont P. see Tabcheh M. 4611
Viani F. see Cavicchio G. 9439
Vicente M. G. H. and **Smith K. M.** Functionalizations of the alkyl substituents in octa-alkylporphyrins 6887
Vicioso M. M. see de Ancos B. 3171
Vidal M. see Vincens M. 403
Vidari G. see De Bernardi M. 7109
Vidari G. see Garlaschelli L. 6769
Viehe H. G. see Bienfait B. 8167
Viehe H. G. see Labille M.-C. 8161
Viehe H. G. see Rousselle D. 8323
Viger A. Coustal S. Schambel P. and **Marquet A.** Synthesis of 18-substituted androst-4-en-3-one derivatives as potential inhibitors of aldosterone biosynthesis 7309
Vigne B. Archelas A. and **Furstoss R.** Microbial transformations-XVIII. Regiospecific *para* - hydroxylation of aromatic carbamates mediated by the fungus *Beauveria sulfurescens* 1447
Vile S. see Brown D. S. 1329
Viljoen A. M. see Martins F. J. C. 8373
Viljoen A. M. see Martins F. J. C. 9215
Vilsmaier E. Tetzlaff C. Butz V. and **Maas G.** Functionalized chloroenamines in aminocyclopropane synthesis—VIII. Amino-azabicyclo[3.1.0]hexane diastereomers from chloroenamines and borohydride 8133
Vincens M. Grimaldo-Morön J. T. and **Vidal M.** Synthèse de tétra oxydes de phosphine macrocycliques à partir des bisphosphoniums bis oxydes de phosphine corréspondants. Notion de protéction de pont 403
Vincent C. see Barton D. H. R. 9383
Vincze A. see Breuer E. 1257
Vismara E. see Coppa F. 7343
Viswanatham K. N. see Satyanarayana P. 8277
Vita-Finzi P. see De Bernardi M. 7109
Vlahov I. see Hedtmann U. 3753
Vloon W. J. see van den Bos J. C. 6787
Vogel P. see Wagner J. 9641
Vogt W. see Zetta L. 1911
von Philipsborn W. see Müller R. 1013
von Schnering H. G. see Terpetschnig E. 3045
Von Voigtlander P. F. see Ghosh A. 8653
VonVoigtlander P. F. see D'Andrea S. V. 6157
Vuilhorgne M. see Fréchet D. 61
Vukicevic R. Konstantinovic S. and **Mihailovic M. Lj.** Electrochemical cyclization of unsaturated hydroxy compounds. Phenylselenoetherification and phenylselenolactonization 859
Vuorinen E. Chalmers A. A. Dillen J. L. M. and **Modro t. A.** Benzo[*b*]thiophenium S,C-ylides: preparation, structure and comparison with thiophenium analogues 8611
Wacker D. A. see Bain J. D. 2389
Wadsworth D. J. see Ley S. V. 8285
Wagenknecht J. H. see Coleman J. P. 809
Wagner H. see Öztunç A. 2273
Wagner J. and **Vogel P.** Total, asymmetric synthesis of hexoses and azasugars branched at C(5) 9641
Wagner M. M. see Kumar V. 5099
Wagschal K. Savage T. J. and **Croteau R.** Isotopically sensitive branching as a tool for evaluating multiple product formation by monoterpene cyclases 5933
Wahlberg I. see Berg J.-E. 9915
Wakahara Y. see Sato T. 9773
Wakamiya T. see Teshima T. 3305
Wakuri S. see Shigemori H. 8529
Wall G. M. see Barton D. H. R. 6127
Wallace T. W. see Cremins P. J. 9431
Wang J. and **Wang Q.** The numbers of constitutions, configurations, chiral and achiral configurations of polyhaloalkanes $C_iH_{2i+2-j}X_j$ 2969
Wang Q. see Wang J. 2969
Wang W. see Ghosh A. 8653
Wang Y. see Baudin J.-B. 3353
Wang Y. see Cheng M.-C. 4861
Wannamaker M. W. see Padwa A. 6139

Wanner K. Th. und **Höfner G.** Chelat- und nicht-chelat-kontrollierte Reduktionen von β-Amido-ketonen: Synthese nicht-racemischer 1,3-Aminoalkohole mit Pyrrolidinstruktur 1895
Wanner M. J. and **Koomen G.-J.** Biomimetic synthesis of quinolizidine alkaloids 8431
Ward R. S. see Pelter A. 1275
Warnock W. J. see Armstrong P. 4495
Warnock W. J. see Grigg R. 4007
Warnock W. J. see Grigg R. 4477
Watanabe N. see Sugai T. 7227
Waterman P. G. see Quader Md. A. 3611
Watkin D. J. see de S. Pereira A. C. 5637
Watson A. B. see Equi A. M. 507
Watson W. H. see Marchand A. P. 907
Watson W. H. see Marchand A. P. 961
Wazneh L. see Gaumont A. C. 4927
Weavers R. T. see Haaima G. 5203
Weidner M. F. see Hopkins P. B. 2475
Weiler L. see Nicoll-Griffith D. A. 2733
Weinstock L. M. see Karady S. 757
Weismiller M. C. see Chen B.-C. 173
Welch M. J. see Sun Y. 357
Welch M. J. see Sun Y. 8863
Weller T. see Netscher T. 8145
Welzel P. see Frischmuth K. 9793
Welzel P. see Hedtmann U. 3753
Welzel P. see Samson E. 1411
Wermeckes B. see Beck F. 725
Wessels P. L. see Martins F. J. C. 8373
Wessels P. L. see Martins F. J. C. 9215
Westley J. W. see Chen Y. 4869
White A. H. see Baker R. W. 7965
White G. R. see Gullu M. 675
Wichmann C. F. see Hensens O. D. 3915
Widdowson D. A. see Dickens M. J. 8621
Widdowson D. A. see Mann I. S. 7981
Widdowson D. A. see Mann I. S. 7991
Wieczorek W. see Pietrusiewicz K. M. 9083
Wijnberg J. B. P. A. see Gijsen H. J. M. 4409
Wilcox C. S. see Smith P. J. 2617
Williams C. S. see Sainsbury M. 4195
Williams D. H. see Mortishire-Smith R. J. 3645
Williams D. J. see Craig D. 3095
Williams D. J. see Ley S. V. 9231
Williams H. J. see Hoshino T. 5925
Williams R. M. Glinka T. Gallegos R. Ehrlich P. P. Flanagan M. E. Coffman H. and **Park G.** Synthesis, conformation, crystal structures and DNA cleavage abilities of tetracyclic analogs of quinocarcin 2629
Williams R. M. see Negishi E. 343
Willisch H. Hiller W. Hemmasi B. and **Bayer E.** Synthesis, properties and crystal structure of the tripeptide Boc-L-prolyl-L-propargylglycyl-glycine methylester 3947
Wilson D. B. see Stewart J. 2573
Wilson K. E. see Hensens O. D. 3915
Wilson K. E. see VanMiddlesworth F. 7563
Winchester B. see Fairbanks A. J. 131
Winkler T. see Gygax D. 5119
Winneker R. C. see Kumar V. 5099
Winter G. see Theil F. 7569
Wistrand L.-G. and **Skrinjar M.** Chirospecific synthesis of *trans*-2,5-disubstituted pyrrolidines via stereoselective addition of organocopper reagents to *N*-acyliminium ions 573
Wolff A. see Zetta L. 1911
Womelsdorf J. F. see Bose A. K. 5379
Wong C.-H. see Pederson R. L. 2643
Wong P. L. see Moeller K. D. 583
Woo J. see Hopkins P. B. 2475
Woo K.-C. see Jones K. 7179
Wood A. see Ley S. V. 9231
Wood K. V. see Saad J. M. 2751
Worakun T. see Grigg R. 9703
Wright A. D. König G. M. Sticher O. and **de Nys R.** Five new monoterpenes from the marine red alga *Portieria hornemannii* 5717
Wright A. D. see König G. M. 1399
Wright M. C. see Baldwin J. E. 5991
Wu J.-C. Xi Z. Gloeli C. and **Chattopadhyaya J.** Intramolecular cyclization-trapping of carbon radicals by olefins as means to functionalize 2'- and 3'-carbons in β-D-nucleosides 2237
Wu X.-M. see Taura Y. 4879
Xi Z. Agback P. Sandström A. and **Chattopadhyaya J.** Synthesis of furo[2,3-*c*]pyran-β-D-nucleosides by radical-cyclization and their conformational analysis by 500 MHz ^{1}H-NMR spectroscopy 9675
Xi Z. see Tong W. 3431
Xi Z. see Wu J.-C. 2237
Xu L. H. see Torii S. 665
Xu M. see Shi G. 1629
Xu Y. see Shu G. 1629
Yakubov A. P. Tsyganov D. V. Belen'kii L. I. Bogdanov V. S. Ugrak B. I. and **Krayushkin M. M.** Unusual effects of steric hindrances in NMR spectra of *o,o'*-dialkylsubstituted benzylidene dichlorides 5237
Yamada K. see Niwa H. 2155
Yamada Y. see Nishida T. 6623
Yamaguchi T. see Sakatsume O. 8717
Yamaguchi Y. see Shono T. 593
Yamakage S. see Sund C. 6305
Yamamoto H. see Maruoka K. 6983
Yamamoto K. see Fuchigami T. 625
Yamamoto K. see Takagi M. 8869
Yamamoto T. Suemune H. and **Sakai K.** An insight into the novel ring transformation reactions using ethylene glycol/BF_3 8523
Yamamoto Y. see Kimura M. 867
Yamamura S. Shizuri Y. Shigemori H. Okuno Y. and **Ohkubo M.** Natural products syntheses using anodic oxidation of phenols as a key step 635
Yamanaka H. see Sakamoto T. 1877
Yamanaka H. see Sakamoto T. 5111
Yamazaki H. Horikawa H. Nishitani T. Iwasaki T. Okamura K. and **Date T.** A two-step synthesis of 2-*exo*-substituted 2-*endo*-amino-norbornenes from 2-acetamidonorbornene-2-carboxylic acids 541
Yamazaki M. see Saito K. 5955
Yashunsky D. V. see Sviridov A. F. 2291
Yashunsky D. V. see Sviridov A. F. 2317
Yasuda S see Sato M. 5689
Yasuhara A. see Sakamoto T. 1877
Yates P. C. McCall C. J. and **Stevens M. F. G.** Structural studies on benzothiazoles. Crystal and molecular structure of 5,6-dimethoxy-2-(4-methoxyphenyl)-benzothioazole and molecular orbital calculations on related compounds 6493
Yau E. see Beaton G. 2377

Yazawa K. see Shigemori H. 8529
Ye S. and **Beck F.** Selective anodic oxidation of camphor 5463
Yeung Lam Ko Y. Y. C. see Abbari M. 71
Yokochi T. see Sugai T. 7227
Yoneda N. The combination of hydrogen fluoride with organic bases as fluorination agents 5329
Yoon D. I. see Mueller-Westerhoff U. T. 909
Yoshida J. Matsunaga S. Murata T. and **Isoe S.** New one carbon homologation reagents utilizing electrochemical oxidation of organosilicon compounds 615
Yoshida T. Hatano T. Ahmed A. F. Okonogi A. and **Okuda T.** Structures of isorugosin E and hirtellin B, dimeric hydrolyzable tannins having a trisgalloyl group 3575
Yoshida T. see Negishi E. 343
Yoshida Y. see Niwa H. 2155
Yoshikawa K. see Kakuno T. 7219
You T.-P. see Cheng M.-C. 4861
Young J. H. see Jones G. 2851
Young J. H. see Jones G. 2861
Yu H. see Schummer A. 9019
Yu H. and **Simon H.** Hydroxylation of and halogen addition to the carbon carbon double bond of (*R*)-2-hydroxy-3-enoic acids 9035
Yu K. L. Handa S. Tsang R. and **Fraser-Reid B.** Carbohydrate-derived partners display remarkably high stereoselectivity in aldol coupling reactions 189
Yus M. see Alonso F. 313
Yus M. see Alonso F. 7471
Yus M. see Alonso F. 9119
Yus M. see Barluenga J. 7875
Zaman K. see Atta-ur-Rahman 3129
Zambianchi M. see Barbarella G. 7677
Zaneveld L. J. D. see Chursciel R. A. 8831
Zani P. see Barbarella G. 7677
Zaragozá R. J. see Abad A. 3829
Zard S. Z. see Barton D. H. R. 7091
Zardaloo F. S. see Iranpoor N. 9861
Zarrinmayeh H. see Boger D. L. 2661
Zeegers P. J. see Thompson M. J. 8787
Zefirov N. S. see Lukin K. A. 5769
Zefirov N. S. see Strelenko Y. A. 9455
Zenk M. H. see Kutchan T. M. 5945
Zetta L. Wolff A. Vogt W. Platt K.-L. and **Böhmer V.** Asymmetrically substituted calix[4]arenes; a two-dimensional ^{1}H NMR study of a tetraester derivative in the cone-conformation 1911
Zhang C. Bourgin D. and **Keese R.** Photochemistry of substituted 1-(but-3-enyl)-indanes 3059
Zhang J. see Roussi G. 5161
Zhang W.-S. see Berlin W. K. 1
Zhang X. see Joshi B. S. 4299
Zhang X. see Ross S. A. 9585
Zhao G. see Saad J. M. 2751
Zhao Z.-C. see Kuzmic P. 2519
Zhdankin V. V. see Stang P. J. 4539
Zhou X.-X. see Koole L. H. 3183
Ziegler C. see Curran D. P. 6189
Zimmerman S. C. Korthals J. S. and **Cramer K. D.** *Syn* and *anti*-oriented imidazole carboxylates as models for the histidine-aspartate couple in serine proteases and other enzymes 2649
Zohdi H. F. see Khalifa F. A. 8243
Zubaidha P. K. Chavan S. P. Racherla U. S. and **Ayyangar N. R.** Synthesis of (±) heritol 5759
Zulaica E. see Bennasar M.-L. 5507
Zupan M. see Šket B. 5029
Zupan M. and **Dolenc D.** Polymers as reagents and catalysts—XXIX. The role of polymeric mediator structure in electrochemical oxidation 5025
Zupancic N. see Šket B. 5029
Zupancic N. and **Šket B.** Photoreduction of 1,1-diphenyl-2-haloethenes by metal hydrides 9071
Zwanenburg B. see Janssen A. J. M. 5513
Zwanenburg B. see Janssen A. J. M. 7409
Zwanenburg B. see Janssen A. J. M. 7645
Zwanenburg B. see Lange J. H. M. 1495
Zwanenburg B. see Lange J. H. M. 1509
Zwanenburg B. see Legters J. 5287